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5 JULY 1937

MALTA

ANNUAL REPORT

ON THE WORKING OF THE

DEPARTMENT OF AGRICULTURE

DURING

1935-36

Published by Authority

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1937

SOME WEIGHTS AND MEASURES.

MALTESE AND ENGLISH EQUIVALENTS.

	Maltese		*English*
1. *Weights*			
	1 rotolo	=	1.75 lbs.
	1 Qantar (100 rotoli)	=	175 lbs.
	1280 rotoli	=	1 ton.
2. *Measures*			
(*a*) *Wine*	1 barile	=	9.50 gallons
(*b*) *Land*	1 tummolo	=	0.27 acres
	3.6 tummoli	=	1 acre
	1 salma (16 tummoli)	=	4.4 acres
(*c*) *Volume*	1 salma (16 tummoli, 96 mondelli)	=	64 gallons or 1 quarter.

NOTE:—For sulla and straw, in Malta 1 soma is a load of 10 bundles. In Gozo, 1 soma is a load of 8 bundles, but the weight per load is roughly the same as in Malta.

MALTA

Report of the Department of Agriculture for the year 1935-36.

OFFICE OF AGRICULTURE — MALTA.
Valletta, 1st March, 1937.

Sir,

I have the honour to forward the report on the Agriculture of Malta for the agricultural year 1935-36 ending in October, 1936, and on the working of the Department of Agriculture during the financial year 1935-36.

I have the honour to be,

Sir,

Your obedient servant,

G. MICALLEF,
Director of Agriculture.

His Honour,
The Lieutenant-Governor.

REPORT OF THE DIRECTOR.

ADMINISTRATION.

STAFF.

The training of the technical officers has been continued. Mr. Cesareo, the poultryman, was sent to England on the 21st September, 1935, for a one year's course of training in poultry keeping at the National Poultry Institute attached to Harper Adams Agricultural College, Shropshire, and successfully obtained the National Poultry Certificate last August.

When returning to Malta he travelled via Leipzig and Berlin, where he attended the 6th World's Poultry Congress as the official representative of the Government of Malta.

The Director of the Government Experimental Farm, who was on vacation leave at that time, also attended the Congress on his own initiative. Mr. Cesareo has now resumed his duties as officer in charge of the poultry work.

On Mr. Cesareo's return the Horticulturist, (Mr. DeBrincat) and the Assistant Horticulturist (Mr. Darmanin) left Malta for a two year's course of training. It has been arranged for them to spend one year in England and the other year in Italy, since in Italy the climate and agriculture are more closely approximate to local conditions.

The Livestock and Dairy Officer, (Mr. Ebeyer Slythe), who had for the last three years been reading for the Diploma in Dairying at the Midlands Agricultural College, England, terminated his course of studies last August, and obtained his Diploma. He was definitely appointed Livestock and dairy Officer on the 3rd September, 1936.

On the death of the late lamented Mr. Paul Borg, Plant Pathologist, which occurred on the 7th May, 1936, temporary arrangements were made by which Mr. Shill, the Controller of Agricultural Exports and Adviser in Marketing, was given charge of Plant Pathology as regards exports and seed potato imports, while Mr. De Nardo, the Oenologist, was entrusted with the work connected with other imports, and field and laboratory work.

It was considered essential that the vacant post of Plant Pathologist should be filled as soon as possible, and Mr. Peralta, at present under training in Italy at the Universities of Florence and Bologna, was considered to be the most suitable officer for the appointment. Mr. Peralta hopes to obtain the Doctorate in Agriculture and also the Doctorate in Medicine at the University of Bologna in July, 1937, and he will then proceed for a short course of post-graduate training in Plant Pathology and Entomology at the South Eastern Agricultural College, Wye, University of London.

Consequent upon this appointment fresh steps had to be taken to train another candidate for Viticulture and Oenology. A Government Notice was published in September, 1936, calling for applications from persons willing to undergo a three year's course of studies in general agriculture and a further year's course in Viticulture and Oenology with a view to appointment to the post of Viticulturist and Oenologist. It was stated that the selected candidate would be expected to obtain the degree of B.Sc (Agric.) of the University of London and in addition, the Diploma of Wine Expert or its equivalent in a Continental Institution to be selected by the Governor. Unfortunately , none of the candidates who presented themselves was qualified for entrance to the University of London and consideration of this appointment had to be postponed until next year.

It was considered wise to provide in time for filling the post of Superintendent of Public Gardens, since the present Superintendent, Mr. Briffa, will be retiring in four years time. Applications were invited and a candidate was selected for training in Horticulture at the University of Reading, England. Besides obtaining the degree of B.Sc. (Hort.), the student selected will have to spend his vacations in practical training in England, and a further six months on the Continent before returning to Malta. Pending the retirement of Mr. Briffa, he will be given a preliminary appointment as Assistant Superintendent of Public Gardens.

Legislation.

The following laws and regulations were enacted during the year:

I. Regulations for the Export of Cumin Seed enacted in virtue of Ordinance No. III of 1935 and published by Government Notice No. 481 of the 29th November, 1935.

II. Ordinance No. V of 1936 to amend the Fertile Soil Preservation Ordinance (Vide Malta Government Gazette Supplement No. XIII of the 14th February, 1936).

III. Regulations enacted in virtue of Ordinance No. X of 1905 and published by Government Notice No. 86 of the 9th March, 1936, specifying the fees payable for phytopathological inspections and certificates.

IV. Regulations for the Export of Onions enacted in virtue of Ordinance No. III of 1935 and published by Government Notice No. 179 of the 20th May, 1936.

V. Regulations enacted in virtue of the Import and Export Duties Ordinance 1934 and published by Government Notice No. 141 of the 21st April, 1936, exempting from customs duty all chemical and organic products for the prevention or cure of diseases of plants or the destruction of weeds.

VI. Regulations enacted in virtue of Ordinance No. XIV of 1930 and published by Government Notice No. 281 of the 24th July, 1936, to regulate the size of packages and the quality of the containers in connection with the importation of seed potatoes.

Contributions and Subsidies.

The following contributions and subsidies were paid during the year. £225 was paid to the Economic-Agrarian Society of Malta as a grant in aid of its activties and to enable it to hold its annual Agricultural Show at Buskett on the 29th June. A subsidy of £200 was paid to the Board of Agriculture, Gozo, which organizes another very popular Industrial and Agricultural Show at Victoria, Gozo, on the 15th August. Three other subsidies amounting to £180 were paid as follows: £80 to the Horticultural Society, Malta, £50 to the Malta Horse Show, and £50 to the Society for the Prevention of Cruelty to Animals. The amount of £44. 17. 0 was distributed for the purpose of encouraging modern apiculture amongst seven persons keeping between them

396 hives, mostly of a modern type, as compared with £42. 4. 6 distributed between keepers of 344 hives in the previous year. £25 was contributed to the Colonial Service Fund, and £113 was paid as part contribution to the Imperial Bureau of Agriculture, Entomology and Mycology. Of the sum of £500 voted in the Estimates for Agricultural Competitions, £115 was expended as follows: £9 on a competition held by the Department amongst keepers of stud boars in Gozo for the purpose of improving housing and feeding methods; £60 on the 4th Vintners' Competition, intended to encourage better methods, equipment and cleanliness in the manufacture of wine, which continues to be one of the most important local agricultural industries; and £350 to the Fur and Feather Committee to enable it to organize its First National Show which was held on the 25th and 26th June, 1935.

Special reports. This report includes special reports on the following branches:—

a) Experimental Farm — Appendix I, page XXXII

b) Viticulture — Appendix II, page XLIII

c) Gardens and Plantations — Appendix III, page XLVII

d) Agricultural Exports and Marketing — Appendix IV, page LV

e) Soil Preservation — Appendix V, page LXII

Revenue and Expenditure. Detailed figures of actual revenue and expenditure for the financial year 1934-35 and 1935-36 are given in Tables I and II respectively.

STATISTICS

A. METEOROLOGICAL

The rainy season during the year 1935-36 was very short, most of the rain falling in November and December instead of being spread over the October/March period. In addition, the total rainfall was much below average, the rainfall for the season only giving an average total of 13.3 inches as compared with an average seasonal rainfall of approximately 22 inches during the preceding 14 years. As a result, the agricultural year was generally unsatisfactory.

Showers fell on the 16th September, and again on the 18th, 20th and 23rd October, but were too light to be of agricultural value. The first useful rain, which fell on the 13th November, was general throughout Malta and Gozo and induced germination. Although the crops suffered somewhat from fairly strong and dry south-westerly and north westerly winds around the 7th December, rain fell sufficiently at this time for the crops to resume normal growth.

Heavy dews fell during the latter half of December which were generally beneficial. As a result, however, an outbreak of potato blight was feared, but a good rainfall on the 31st December, followed by good growing weather, resulted in the winter crop of potatoes being over-average in quantity, generally free from disease and clean from soil owing to the relatively dry weather conditions during reaping.

The spring crop of potatoes suffered badly from drought and yields were generally below average. The almost entire absence of disease resulted, however, in the crop being better than at first anticipated.

The warm dry winter weather conditions were very favourable to the potato moth and infestation became fairly extensive this year with the spring crop towards the end of April, though it proved less severe in the later reaped districts.

Good late showers fell around the 23rd April and the middle of May, giving about $1\frac{1}{4}$ inches in each month. Whilst these rains were either too late or too small to benefit other crops appreciably, they were very beneficial to onions and the crop reaped was over average.

The production of fruit, vegetables and forages was very poor owing to the season's rainfall shortage. The late rains in May damaged several crops, such as wheat, caterpillar, vetch and cumin seed, which were already greatly affected by the shortage of

winter rains. For example, these rains caused darkening of the wheat straw and discoloration of the cumin seed. The drought and dry southerly winds resulted in a considerable amount of die-back of fruit trees and generally poor fruit yields.

The monthly and total rainfall as compared with that of 1934-35 is shown in Table III.

B. CROPS

The estimated acreage of the various crops during the year 1935-36 was 47,955 acres, of which 5,531 acres were estimated as being planted with second crops. The acreages of the various crops planted were as follows :— cereals, 19,207 acres; vegetables (including tomatoes and melons), 14,523 acres; forage crops, 9,441 acres; cumin and cotton, 1,586 acres; vines and fruit trees, 3,164 acres; and tobacco, 34 acres.

The number of mechanical irrigation and pumping appliances in operation in Malta and Gozo was again compiled this year. The figures are tabulated below :—

	Air Motors	Oil engines & centrifugal pumps	Water Mills "Noria"	Other Mechanical Appliances	Total
Malta	354	99	249	96	798
Gozo	77	36	16	19	148
Totals ...	431	135	265	115	946
Increase since 1934-35 (*)	109	22	14	4	149

* Note :— Almost all the new appliances were installed in Malta.

Wheat. The area under wheat amounted to 9,813 acres, as against 9,320 acres in the preceding year, the increase being generally due to crop rotation. Planting was carried out in November and December and the preparatrion of the soil was not hampered, this season, by rainy weather. Germination though late was good, but subsequently the plants suffered from drought and as a result there was a particularly poor straw production. The rains in middle May were too late to increase grain yield but caused straw discoloration. The production was estimated at 29,451 quarters, which is equivalent to 24 bushels per acre, as compared with an average of 30.4 bushels per acre during the preceding 10 years.

Barley and Meslin. Barley and meslin were sown on 4,867 acres, as against 4,719 acres in 1934-35. This year's figure includes 2,876 acres of barley in Malta and 144 acres of barley and 1,847 acres of meslin in Gozo. The yield was estimated at 20,716 quarters, viz : 13,776 quarters of barley (685 quarters in Gozo) and 6,940 quarters of meslin as compared with yields of 10,279 quarters of barley and 6,096 quarters of meslin in the preceding year.

Maize. The cultivation of maize exceeded that of last year by 24 acres, a total of 109 acres being grown in Malta and 138 acres in Gozo. The increased planting was probably made because of the rains in April and May, with the help of which farmers hoped to reap a crop. The winter drought, however, proved to be a determining factor and on shallow unirrigated lands the plants were either cut green for forage or dried up, and on deep fertile soil, whilst the crop matured, the yield was very poor. In consequence, the total production only amounted to 798 quarters as against last year's production of 1,629 quarters.

Broad Beans. The cultivated area under broad beans amounted to 1,753 acres, a decrease of 77 acres, with an estimated production of 5,685 quarters. The corresponding figures last year were 1,830 acres and 6,865 quarters. A considerable number of farmers are still planting in early autumn, and this year the broomrape was very prevalent and caused considerable damage on autumn sown beans. The yield, namely 3.2 quarters per acre as compared with an average yield of 4.4 quarters per acre during the preceding 10 years was generally unsatisfactory, this being largely attributable to rainfall shortage and broomrape.

Vetches. Vetches were planted on an area of 2,375 acres, as compared with 2,521 acres in the year 1935. The yield was estimated at 4,274 quarters, the figure for last year's production being 4,741 quarters. As vetches are generally sown in February and March, during which months the rainfall only totalled about 1 inch, many of the plants died soon after germination, and consequently in many cases the fileds were again ploughed and prepared for some other crop. The surviving plants, which benefited by the rain in April, were damaged by the rain in May and a poor crop was reaped, as is shown by the yield of 1.8 quarters per acre as compared with the average yield of 2.6 quarters during the preceding two years.

Potatoes. The total value of this year's potato production was approximately £175,500, taking the average prices per ton for the winter, spring and summer crops as £5. 6. 8; £8; and £8. 10. 0 respectively.

(a) *Winter Crop Potatoes.* Since the first useful rains did not fall until middle November, the germination and sprouting of the winter potatoes were late. The plants were, however, favoured by the hot sunny weather and by adequate rainfall (about seven inches) in November and December and developed well. Later, on the 5th and 6th January, many plants in certain localities, particularly in exposed sections in the Central District, were damaged by a hot dry wind — "ehtrieq" or "Hruq in-nar" — which checked growth and caused drying up of foliage. The production was generally satisfactory, being estimated at 10,950 tons on an area of 3,281 acres, as against 6,414 tons and 2,809 acres last year. The yield per acre, namely 3.3 tons, compares favourably with the average yield of 2.9 tons per acre during the preceding 5 years. The tubers were free from blight, and very clean owing to the relatively dry weather during reaping. In consequence, the appearance of the crop was generally much more attractive than in recent years. As usual, the Eastern District suffered most from lack of rain, and the yields in that district were not so heavy as those in the Central and Western Districts.

(b) *Spring Crop Potatoes.* A total of 49,086 bags of 2 cwts. each of seed potatoes were imported as compared with 41,692 bags for the 1935 crop. Full details of the 1935-36 seed potatoes imports were given in the previous Departmental Annual Report. As in previous years, the bulk of the seed was imported from Northern Ireland with relatively small quantities from the Irish Free State, Holland and Scotland. The percentages of the different varieties imported were as follows, 73% Champion and 2% Eigenheimer (yellow flesh type) and 12% Up-to-Date, 7% Northern Invincible and 6% Arran Banner (white flesh type). Apart from an increased import of 5,429 bags of the Champion variety, giving a total import of 36,024 bags of this variety, the outstanding seed feature was the import of 2,715 bags of the Arran Banner variety as compared with 560 bags in the previous year. The condition of the seed on arrival was, as in 1934-35, not very satisfactory, the seed showing about 8% wastage due to blight and wet rot and about an additional partially damaged by dry rot. Regulations were published in July, 1936, requiring all seed imported after 31st December, 1936, to be packed in 1 cwt. bags and it is hoped that the abolition of the bulky 2 cwt. pack will improve the condition of the seed.

With the relatively dry and warm winter, planting took place under favourable conditions and nearly all the imported seed was sown. The area under spring crop potatoes this year was estimated at 6,287 acres as compared with 4,934 acres in 1935 and an average of 4,271 acres during the preceding 10 years. The increase in acreage was due to the increase in the quantity of seed imported and to the good planting conditions.

With the exception of the seed of the Up-to-Date variety, germination was quite satisfactory: frequent failures were observed with the Up-to-Date variety but this variety is generally much more susceptible to disease. As regards weather conditions during growth, the governing factor was the great shortage of winter rainfall. Where irrigation water could be applied the plants benefited by the warm sunny spring weather and the crop reaped was rather over-average, but where farmers had to rely entirely on rainfall the crop was generally much below average particularly with the later plantings. Several hail-storms were experienced from the 3rd to the 5th February, which were also

accompanied by a strong cold north wind: these conditions, which were followed by ground frost on the 8th and 9th February, caused considerable damage to the early plantings.

Owing to the drought and the prevailing warm weather the crop matured rapidly, the peak of the export being reached early in May about two weeks earlier than usual. The total crop generally, however, was not reduced by the drought so much as was anticipated; the increase in acreage and the good yields of irrigated fields also compensated for the very low yields in many instances. The production was estimated at 12,490 tons as compared with 11,104 tons in 1935. This year's production is equivalent to a yield of 2.0 tons per acre as compared with an average yield of 4.0 tons per acre in the preceding ten years. An outstanding feature was the good yields obtained with the Arran Banner variety under irrigation, particularly with the later plantings, and it seems that this variety will soon largely, if not entirely, replace the Northern Invincible variety which is unsatisfactory for many reasons. A detailed tabular statement of the 1936 potato exports was given in the previous Departmental report: Holland (54%), the United Kingdom (19%) and Belgium (26%) remained the principal market outlets, but, whilst the exports to the United Kingdom again showed a slight increase, the exports to Holland, the principal market, showed a decided decrease at the expense of an increase in the exports to Belgium, which this year took second place.

Exports to the United Kingdom would have been greater but for an unusual infestation of potato moth: the warm dry winter weather conditions were very favourable to the potato moth and whilst attacks of moth do not usually occur until the end of May or early June a slight infestation was observed this year with a consignment inspected in middle March. Infestation became extensive with spring crop potatoes towards the end of April, particularly with those from the irrigated areas around Mellieħa and Għajn Tuffieħa, and resulted in frequent refusals for export to the United Kingdom where moth infested potatoes are rigidly prohibited. Fortunately, however, reapings from the later districts, e.g. Siġġiewi, Rabat, Żebbuġ, showed only a slight infestation, probably owing to situation and slight changes in weather conditions.

(c) *Summer Crop potatoes.* Summer Crop potatoes, which are mostly grown under irrigation, were planted this year on an area of 480 acres and gave an estimated production of 2,025 tons. The corresponding figures last year were 530 acres with a production of 1,740 tons. The summer crop of potatoes has in the past usually consisted of the local White Elephant variety, but this year at Mġarr, Mellieħa and St. Paul's Bay more than half the area was planted with the Arran Banner variety which gave better results.

Onions. Onions were grown on an area of 1,073 acres as compared with 944 acres in 1935, the production being estimated as 8,036 tons, as compared with last year's production of 4,561 tons. This increase in acreage, namely 129 acres, is largely attributable to the good demand with the short crop in 1935.

The onion plants suffered this year from the relative drought in February and March, but the rains during the growing period in April and May were very beneficial, and as a result a very good crop free from disease was obtained.

The varieties of onions grown can be classified as follows:— (a) The early round yellow type, which is grown primarily for export, mostly in the Eastern District; (b) The early white type, grown mostly in the Central District around Żebbuġ, which is produced for home consumption, and (c) The main crop of pear shaped, oval and long oval types, of colours ranging from yellow to dark red, which are chiefly grown in the vicinities of Siġġiewi, Rabat and Dingli. This crop is mostly consumed locally but some, particularly of the pear shaped yellow type from Siġġiewi, is exported. In view of the good demand from abroad this year for the graded produce, an increased acreage of the early round yellow type is expected in 1937. Despite the fairly heavy crop the average country market price for onions for export this year was around £2. 13. 4 per ton.

A new variety of onion, namely, the round yellow Dahaby variety, was introduced this year from Egypt by the Department: samples of seed were distributed to farmers and trials regarding yield and seed production locally are being carried out.

Tomatoes. The returns under tomatoes show an area of 798 acres with an estimated production of 28,336 cwts. The corresponding figures in 1935 were 1,228 acres and 91,810 cwts. The low yield recorded this year was inevitable with the season's rainfall shortage, particularly since tomatoes are mostly grown as a non-irrigated summer crop relying largely on residual sub-soil moisture.

As was anticipated, the types of tomato introduced by this Department were more extensively grown this year, and seed and plants of these types were again distributed to farmers from the Government Experimental Farm. The average price paid to the farmer for tomatoes was 3d. per pesa (3/8½d. per cwt:).

Melons. Melons and water melons were cultivated this year on an area of 516 acres, 185 acres being grown in Malta and 331 acres in Gozo. This acreage shows a decrease of 414 acres compared with the 1935 figures, the reduction in acreage being due to the winter rainfall shortage which made planting useless in many cases. The total production this year was estimated at 32,814 cwts: as compared with 53,272 cwts: in 1935.

Vegetables. The area under vegetables, including dry-farmed vegetables, amounted to 2,088 acres, as against 2,188 acres in the preceding year. The production, which was again poor, was estimated at 144,607 cwts: as compared with 150,858 cwts: in 1935. The early dry-farmed cauliflowers and cabbages suffered to some extent from drought, since the first useful rains did not fall until middle November, but the main crop in January and February compensated to some extent for the relative failure of the early crop. In consequence, vegetable prices were high throughout practically all the season, except for cauliflowers and cabbages during February, which were selling then even as low as 1/8d. per qantar. Peas and beans were scarce owing to the winter rainfall shortage: the plants were also damaged by the strong high north wind and hailstorms early in February.

Forages. The area under forages, namely sulla, green barley and caterpillar, consisted of 9,441 acres as against last year's total of 10,906 acres. The estimated total production was very low amounting only to 322,605 "some" or loads of 10 bundles as against 706,570 "some" in the preceding year. The yield per acre, namely 34.2 "some" also compares very unfavourably with the average yield of 60 "some" during the preceding 10 years. The acreage and production of the different types of forage were as follows:— sulla, 6,788 acres, 222,474 "some"; green barley, 1,114 acres, 54,701 "some"; and caterpillar, 1,539 acres, 45,430 "some". Owing to the delayed rainy season, the germination of sulla and caterpillar was generally rather late, the exception being that in the Central District the seed germinated after the rains in September and October which amounted in that locality to about 1½ inches. The development of the crop was, however, slow, the plants being unable to benefit by the warm weather during December and January owing to shortage of rain. As a result of the continuation of the drought reaping was carried out earlier than usual: the crop, whilst being free from fungus diseases, was thin and short and poor in quantity.

Cumin. The area under cumin was estimated at 1,529 acres, this representing a decrease of 402 acres, which is largely attributable to the winter drought discouraging planting in some instances. The yield was estimated at 5,912 cwts:, that is 3.9 cwts: per acre, as compared with the yield of 6,320 cwts: from 1,931 acres, or 3.3 cwts: per acre in 1935, when conditions were also not very satisfactory owing to the absence of spring rains. The average yield during the past 10 years has been 5.5 cwts: per acre. This year the drought retarded growth considerably and the late rains in May caused some damage, particularly with regard to darkening of the seed. Demand from abroad has to date (end October) been relatively limited since the local price, around £34 per ton f.o.b. in August, whilst lower than last year, has been appreciably higher than that ruling in other exporting countries.

Cotton. Cotton was cultivated on an area of 57 acres, 9 acres being grown in Malta and 48 acres in Gozo. The yield was estimated at 12,748 lbs: of lint and 335 cwts: of cotton-seed as against 7,910 lbs: of lint and 312 cwts: of cotton-seed in the previous year.

Grapes. The total area under vines now amounts to 1,834 acres, this representing an increase of 257 acres since 1935 : 576 acres are planted in Malta and 1,258 acres in Gozo. This year's grape production, which was estimated at 45,590 cwts :, was very much less than in 1935 when the production was estimated at 84,570 cwts : . The poor yield this year is due to two factors, namely the drought, which adversely affected flowering and fruit development, and the heavy 1935 crop, which left the vines weak.

Apart from the grapes consumed fresh, the total quantity available for wine manufacture was estimated at 44,000 cwts : which should have yielded 41,880 "barili" (or 397,860 Imperial Gallons) of wine.

Citrus Fruits. The area under citrus fruits was reported as 194 acres, as against a total of 193 acres in 1935. This year the crop of oranges, mandarines and lemons was again poor, being estimated at 142,970 dozen, the crop in 1935 being estimated at 130,230 dozen.

Last season around 18,000 fruit-fly traps were imported from Italy and distributed free, together with supplies of the liquid bait (Clensel), to private growers. The Department is continuing to distribute free supplies of the bait and additional traps may be purchased locally. It is considered that this campaign has been decidedly beneficial in helping to control the fruit-fly.

Other Fruits. Other fruit trees are planted on an area of 1,136 acres, the yield being estimated this year at 17,648 cwts. The corresponding figures in 1935 were 1,120 acres and 74,261 cwts. Fruit trees in general suffered considerably from the drought and also from the high wind and hailstorm in early February.

Tobacco. The acreage planted with tobacco this year, namely 34 acres, shows an increase of 10½ acres over last year's figures. It was estimated that this year's acreage, 10 acres of which were planted in Malta and 24 acres in Gozo, gave a yield of 189 cwts., as compared with the 1935 production of 132 cwts. The price remained low at about 77s. per cwt.

C. EXPORTS OF AGRICULTURAL PRODUCE

The value of field and garden produce during the year was estimated at about £570,601, consisting chiefly of potatoes (£175,532), onions (£21,429), other vegetables, including tomatoes (£72,135), grapes (£45,958), melons (£10,665), other fruits (£37,603) wheats and barley (£85,542) and forage crops (£81,529). The value of farm and dairy produce was about equal to that of crops.

Of these £113,282 worth were exported. Comparative value of exports of agricultural produce and manufactured goods for the last seven years are shown in graphic form in table.

The principal agricultural exports during the calendar year 1935 were as follows :—

Potatoes. The quantity exported was 9,279 tons valued £108,323 as compared with 12,313 tons valued £105,370 for the previous year. Of this quantity 68%, equivalent to 70% of the total value, went to Holland, and over 16% went to the United Kingdom.

Onions. The quantities exported were 12,436 cwts. valued £3,863, of which 48% went to Sweden, a new customer, and the rest chiefly to Norway, Holland, and the United Kingdom.

Cumin Seed. Cumin seed exports were represented by 5,333 cwts, valued £11,342. The chief markets were France, Chile, the Netherlands, and the United Kingdom.

Hides and Skins. Exports amounted to 12,283 cwts., mostly hides, valued £16,019. Over 66% of these went to Italy, and 21% to Turkey.

Bran. Shipments of bran (mostly from locally milled imported wheat) amounted to 26,552 cwts., valued at £5,942, going chiefly to the United Kingdom and Lybia.

Other Exports. Other exports included honey (£406), tallow (£2,532), squills (£163), wool (£1,090), oranges and mandarines (£143), melons and other fruits (£301), tinned tomatoes and tomato extract (£512), and cotton (£658).

Other particulars are given in appendix IV and table X.

D. TABLES.

A list of the tables appended to the Director's Report is shown hereunder :—

Table I and II — Revenue and expenditure for the financial years 1934-35 and 1935-36.

Table III — Monthly and total rainfall as compared with that of 1934-35.

Table IV — Area of various crops.

Table V — Estimated quantities of Agricultural Produce.

Table VI — Acreage and yields of the principal crops in 1936 as compared with the average acreages and yields during the preceding ten years.

Table VII — Estimated values of Agricultural Produce.

Table VIII — Average prices of Agricultural Produce.

Table IX — Animal population on the 31st December, 1935.

Table X — Importation of eggs.

Table XI — Comparative value of exports of agricultural produce and other exports.

Table XII — Quantities and value of exports of agricultural produce.

Table I. Statement of actual revenue for 1935-36 as compared with the revenue for 1934-35.

Head and Item of Revenue.	1934-35			1935-36			Increase			Decrease		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
III. LICENCES, STAMP & OTHER DUTIES, COURT FINES, &c.												
Miscellaneous Fines	—	—	—	—	12	6	—	—	—	—	12	6
V. FEES OF OFFICE AND REIMBURSEMENTS.												
A. Fees of Office.												
Agriculture.												
Certificates	136	11	6	102	10	0	—	—	—	34	1	6
Miscellaneous Fees.												
Miscellaneous	43	9	6	37	5	10	—	—	—	6	3	8
B. Reimbursements.												
Sale of vegetables from Experimental Farm	602	4	4	520	6	4	—	—	—	81	18	0
Sale of trees, plants, &c. from public plantations	317	18	1¼	348	13	2	30	15	0¼	—	—	—
Sale of fruit, &c., from S. Anton & Buskett Gardens	494	19	4	665	13	7	170	14	3	—	—	—
Sale of chemicals, hire of spraying pumps, &c.	19	1	1	8	8	0	—	—	—	10	13	1
Inspection of agricultural produce, &c. ...	475	5	5	210	9	10	—	—	—	264	15	7
Sale of livestock from Experimental Farm ...	98	19	11	355	2	1	256	2	2	—	—	—
Miscellaneous Reimbursements.												
Miscellaneous	29	14	8	56	13	4	26	18	8	—	—	—
	2,218	3	10¾	2,305	2	2	484	10	1¼	397	11	10
XII. RECEIPTS UNDER THE WIDOWS & ORPHANS PENSIONS ACT, 1927.												
Contributions under the W.&O. Pens: Act, 1927	117	12	1	127	10	0	—	—	—	9	7	11
XIII. MISCELLANEOUS RECEIPTS.												
Miscellaneous	—	12	10	3	0	0	2	7	2	—	—	—

Table II. Statement of actual Expenditure for 1935-36 as compared with the expenditure for 1934-35.

Head & subheads of Expenditure	1934-35			1935-36			Increase			Decrease		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
I. ANNUAL EXPENDITURE.												
A. Personal Emoluments	9,187	2	1	10,023	10	3	836	8	2	—	—	—
B. Other Charges.												
Transport	373	9	10	468	19	3	95	9	5	—	—	—
Stationery, purchase of publications for reference library and cost of departmental publications	209	1	5	196	13	9	—	—	—	12	7	8
Water supply, lighting & electric current ...	15	4	0	26	14	9	11	10	9	—	—	—
Incidental expenses including rent of telephones	60	15	9	87	19	10	27	4	1	—	—	—
Subsidy to the Economic Agrarian Society, Malta	225	0	0	225	0	0	—	—	—	—	—	—
Towards the improvement of Agriculture £105												
Towards the upkeep of the Society's Experimental Farm £20												
Towards the holding of agricultural competitions... ... ... £77												
Towards encouraging the growing of vines & fruit trees £13												
For prizes to exhibitors of the best Malta mule-breeding donkeys £10												
Compilation of Statistics	117	10	7	146	0	3	—	—	—	31	10	4
Subsidy to the Board of Agriculture, Gozo...	200	0	0	200	0	0	—	—	—	—	—	—
Subsidy to the Horticultural Society ...	80	0	0	80	0	0	—	—	—	—	—	—
Subsidy to the Malta Horse Show	50	0	0	50	0	0	—	—	—	—	—	—
Subsidy to the M.S.P.C.A.	—	—	—	50	0	0	50	0	0	—	—	—
Subsidies and grants of beehives & appliances for the encouragement of modern apiculture..	52	4	6	44	17	0	—	—	—	7	7	6
Contribution to the Colonial Agricultural Service Fund	25	0	0	25	0	0	—	—	—	—	—	—
Part contribution to the Imperial Bureaux of Agriculture, Entomology and Mycology...	119	0	0	113	0	0	—	—	—	6	0	0
Uniforms	10	9	0	17	1	3	6	12	3	—	—	—
Stamps and other expenses in connection with the Workmen's Compensation Ordinance	39	14	6	47	2	11	7	8	5	—	—	—
Expenses in connection with agricultural competitions	419	4	8	95	0	5	—	—	—	324	4	3
Expenses in connection with the export of potatoes under Ordinance No. XIV of 1930	357	12	8	—	—	—	—	—	—	357	12	8
Expenses in connection with the Working of the Fertile Soil Ordinance of 1935 ...	—	—	—	671	16	1	671	16	1	—	—	—
Experimental Farms.												
Maintenance, &c. of Government stud farm and experimental farms	2,223	17	2	2,768	15	2	544	18	0	—	—	—
Purchase and distributions of seeds, fertilizers &c. in connection with demonstrations on private farms	110	10	2	118	10	8	8	0	6	—	—	—
Expenses in connection with demonstrations to farmers at the Experimental Farm ...	—	—	—	88	18	11	88	18	11	—	—	—
Plant Pathology.												
Purchase of chemicals and appliances and treatment of plant diseases	546	2	0	1,393	5	8	847	3	8	—	—	—
Rent of premises used as a store	—	—	—	15	0	0	15	0	0	—	—	—
Viticulture and Oenology.												
Maintenance of nurseries, &c., in Malta and Gozo	618	16	6	699	14	3	80	17	9	—	—	—
Expenses in connection with Oenology including maintenance of Laboratory ...	113	12	7	61	11	3	—	—	—	52	1	4
Training of one student in general Agriculture and Oenology in Italy	179	1	8	200	1	8	21	0	0	—	—	—
Carried forward.	15,393	9	1	17,914	13	4	3,312	8	0	791	3	9

Table II. Statement of actual Expenditure for 1935-36 as compared with the expenditure for 1934-35.—*cont.*

Head & subheads of Expenditure	1934-35			1935-36			Increase			Decrease		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
B. Other Charges.—*cont.*												
Brought forward ...	15,393	9	1	17,914	13	4	3,312	8	0	791	3	9
Gardens and Plantations.												
Maintenance, &c. of Public gardens, nurseries and plantations..	2,935	4	4	3,428	16	2	493	11	10	—	—	—
Maintenance, &c. of S. Antonio and Verdala Private Gardens.	238	9	7	331	1	2	92	11	7	—	—	—
Water supply to ditto and to vine nurseries	184	10	10	228	15	11	44	5	1	—	—	—
Planting trees in Malta & Gozo	488	5	1	248	15	8	—	—	—	239	9	5
Animal Husbandry.												
Expenses in connection with the prevention of animal diseases	81	14	7	273	4	6	191	9	11	—	—	—
Premiums to breeders of licensed pedigree stock and other connected expenses ...	120	11	2	361	14	0	241	2	10	—	—	—
Training of a Student in animal husbandry in England	250	0	0	250	0	0	—	—	—	—	—	—
Marketing.												
Expenses in connection with the export of Agricultural produce	—	—	—	472	5	0	472	5	0	—	—	—
Extraordinary Expenditure.												
Furniture & Laboratory equipment at the Experimental Farm	76	2	11	40	7	6	—	—	—	35	15	5
Purchase of farm implements	98	2	9	136	0	9	37	18	0	—	—	—
Purchase of a second hand motor-car ...	80	0	0	—	—	—	—	—	—	80	0	0
Purchase of a second hand truck	—	—	—	—	—	—	—	—	—	—	—	—
Extending the Experimental Farm	199	7	4	998	16	3	799	8	11	—	—	—
Increasing the supply of irrigation water at Buskett.	234	15	5	16	6	9	—	—	—	218	8	8
Purchase of pedigree stock for loan to farmers.	846	17	10	940	0	5	93	2	7	—	—	—
Expenses of a delegation to represent Malta at the World's X Dairy Congress ...	108	13	4	—	—	—	—	—	—	108	13	4
Construction of stud farm and purchase of livestock.	2,280	2	0	—	—	—	—	—	—	2,280	2	0
Equipment of Oenotechnical Laboratory, including water and gas installations ...	215	5	4	23	15	11	—	—	—	191	9	5
Expenses in connection with the adoption of a scheme for the disposal of house refuse	33	7	4	—	—	—	—	—	—	33	7	4
Employment of a temporary Clerk	33	15	0	—	—	—	—	—	—	33	15	0
Expenses in connection with the services of the Adviser in Agricultural Marketing ...	14	10	0	31	2	3	16	12	3	—	—	—
Purchase of a clock.	—	—	—	5	5	0	5	5	0	—	—	—
Purchase of a motor sprinkler	—	—	—	410	10	0	410	10	0	—	—	—
Purchase of a duplicator	—	—	—	27	10	0	27	10	0	—	—	—
Construction of Government Stud Farm ...	—	—	—	18	10	10	18	10	10	—	—	—
Expenses in connection with the visit to London of a Government Delegate at the Imperial Entomological Conference ...	—	—	—	69	7	2	69	7	2	—	—	—
Furniture & other equipment for the Office of the Adviser in Animal Husbandry ...	—	—	—	38	7	5	38	7	5	—	—	—
Furniture for the Office of the Veterinary Pathologist	—	—	—	19	7	9	19	7	9	—	—	—
Expenses in connection with the Establishment of Agricultural Parish Committees...	—	—	—	18	0	0	18	0	0	—	—	—
Towards the development of certain lands in the Buskett Gardens	—	—	—	498	2	2	498	2	2	—	—	—
Training of a poultryman in England ...	—	—	—	100	0	0	100	0	0	—	—	—
Expenses in connection with measures to be adopted for improving the supply of irrigation water	—	—	—	13	8	5	13	8	5	—	—	—
Laying distributory mains & electricity installation in the Government Experimental Farm	—	—	—	215	7	9	215	7	9	—	—	—
Total ...	23,913	3	11	27,129	12	1	7,228	12	6	4,012	4	4

TABLE III.

Table showing the monthly and total rainfall (in inches) for the year 1935-36 as compared with 1934-35.

Town or village	Sept 1935	Oct. 1935	Nov. 1935	Dec. 1935	Jan. 1936	Feb. 1936	March 1936	April 1936	May 1936	June 1936	Total Sept.-June 1935-36	Total Sept.-June 1934-35
	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.
MALTA												
Msida	0·45	2·58	5 18	6·20	0·91	0·68	...	0·98	1·23	...	18·21	32·03
Żabbar	0·60	2·68	4·56	3·58	1·98	0·86	0·07	1·12	1.17	0·04	15·76	11·76
Mdina	0·23	1·10	3·97	4·52	1·73	1·15	0·32	1·26	1·35	0 03	15·66	33·79
Sliema	0·51	1·28	4·68	4·46	1·33	0·94	0·03	1·26	1·15	...	15·64	27·59
Żebbuġ	0·37	1·59	3·50	4·60	1·73	0·97	0·12	1·35	1·29	...	15·52	28·92
Lija	0·58	1·71	3·76	4·24	1·76	0·98	0·12	1·31	0·89	0·05	15·40	32·38
Naxxar	0·29	1·51	3·97	4·54	1·45	0·90	0·10	1·07	1·22	0·04	15·09	38·23
Birkirkara	0·45	1·59	4 39	3·65	1·48	0 95	0·16	1·10	0·90	...	14·67	32·66
Qormi	0·40	0·91	3·62	5·19	1·33	0·82	0·22	1·00	0 95	0·04	14·48	27·49
San Antonio Gardens	0·47	1·77	3·67	3.70	1·76	0·83	...	1·29	0·81	...	14·30	30·50
Mosta	0·45	1·35	3 90	4·35	1·56	0·56	...	1·05	0·93	...	14·15	33·84
Mellieħa	0·33	1·50	5 48	2.82	1·55	0·82	0·08	0·69	0·66	0·16	14·09	31·24
Żurrieq	0·42	0·77	3·60	3·29	1·34	1·38	0·11	1·21	1·59	0·07	13·78	27·63
Għargħur	0·49	1·03	4·28	3·76	0·99	1·28	...	0·86	0·97	...	13·66	33·55
Argotti Botanic Gardens ...	0·36	0·72	4·42	3·14	1·28	1·01	0·19	1·11	1·34	0·02	13·59	... *
Buskett Public Gardens ...	0·25	0·55	4·41	3 69	1·37	0·92	...	1·22	0·90	...	13·31	28·96
Siġġiewi	0·31	0·52	3·19	4·17	1·32	1·34	0·18	1·47	0·79	...	13·29	27·78
St. Paul's Bay	0·36	0 92	4·04	3 20	2·44	0·62	...	0·61	0·76	...	12·95	29·34
Qrendi	0·52	0·70	2·34	3·58	1·28	1·66	0·10	1·31	1·33	...	12·82	28·70
Ħamrun	0·45	1·16	3·65	3·55	1·00	0 68	0·06	1·01	1·01	...	12·57	23 71
Vittoriosa	0·24	2·02	3·87	3·21	0·99	0·19	...	0·92	1·10	...	12·54	25·45
Għaxaq	0·25	0·37	3·80	3·41	1·26	0·81	0·04	1·29	1·21	0·07	12·51	23·89
Luqa	0·48	0·42	3·35	3·21	1·43	0·84	0·08	1·26	1·40	0·03	12·50	23·71
Cospicua	0·16	1·49	3·40	2·66	1·49	0·64	0·07	0·86	1·28	0·03	12·08	22·47
Floriana	0·71	0·01	4·07	3·49	0·76	0·78	0·06	1·03	1·14	...	12·05	24·49
Żejtun	0·15	0·60	2·83	3·45	1·25	0·81	0·03	1·11	1·35	0·05	11·63	23·80
Tarxien	0·29	0·37	3 37	2·97	0·91	0·81	0·06	0·87	1·39	0·20	11·24	22·36
Senglea	0·23	2·15	3·47	2·18	0·74	0·35	0·03	0·86	1·14	0·04	11·19	3·68
Gudja	0·32	...	4·13	3·10	1·14	0·87	...	1·20	...	...	10·76	25·96
Mqabba	0·47	0·43	1·82	4·26	1·11	1·14	0·17	..	1·26	...	10·66	31·71
Dingli	...	0·53	2·87	2·42	1·15	0·09	...	0·64	0·88	...	8·58	22·72
Birżebbuġa	0·16	0 43	...	3·42	1·10	1·05	...	0·19	0·8c	...	7·15	19·50
Mean	0·36	1·11	3·67	3·68	1·31	0·86	0·07	1·01	1·06	0·02	13·19	...
Corresponding mean last year ...	1·19	3·41	5 64	4·86	5·58	0·95	4·77	0·11	...	...	...	26·54
Gozo												
Għajnsielem	0·08	0·80	6·19	2·93	2·10	0·93	0·16	1·00	1·09	0·52	15·80	30·55
Xagħra	0·17	2·62	4·99	2·73	1·62	0·74	0·14	0·59	0·95	0 38	14·93	28·18
Sannat	0·09	0·60	5 93	2·84	2·11	0·88	0·12	0·66	0·80	0·33	14·36	29·88
Xewkija	0·07	1 60	5·97	2·48	1·94	0·48	...	0·66	0·76	0·38	14.34	27·17
Żebbuġ	0·14	0·46	5·96	3·10	1 93	0·87	0·16	0·71	0·58	0·27	14·18	29·12
Victoria	0·15	1·36	5·73	2·51	1·95	0·59	...	0·58	0·71	0 29	13·87	29·23
Qala...	0·06	0·82	5·39	2 73	1·88	0·66	...	1·00	0·97	...	13·51	29·86
Nadur	...	0·73	5·68	2·45	1 59	0·46	...	0·77	0·73	0·03	12·44	29·90
Għarb	0·14	0·15	4·98	2·70	1 19	0·77	...	0·63	0·57	0·44	11·57	25·70
Kemmuna	0·14	0·72	4·81	1·75	2·15	0·72	0·23	0·95	0·85	...	12·32	22·55
Mean	0·10	0·98	5·56	2·62	1·84	0·71	0·08	0·75	0·80	0·26	13·73	...
Corresponding mean last year ...	1·41	5·54	4·05	5·12	6·15	1·17	4·70	0·03	...	...	...	28·21
Mean for Malta, Gozo and Kemmuna	0·30	1·08	4·12	3·43	1·44	0·82	0·07	0·96	1·00	0·08	13·32	...
Corresponding mean last year ...	1·30	4·47	4·84	4·99	5·86	1·06	4·73	0·07	...	...	...	27·37

* Returns from this station available for first year.

TABLE IV.

Area of the various crops 1935-36.

	Locality	Nature of the crop and number of acres of land in each crop.														
		Wheat	Barley	Beans	Vetches	Potatoes	Onions	Cumin	Citrus fruits	Vines	Other fruits	Vegetables	Forages	Pasture	Total No. of acres in crop	No. of acres of uncultivated land
Valletta Dist.	Valletta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...
	Floriana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...
	Hamrun & Marsa ...	62	14	10	2	42	4	10	2	—	10	20	76	2	254	26
	Msida & Pi età ...	42	11	4	11	34	—	5	2	—	3	1	26	1	140	3
	Sliema	14	3	1	3	15	—	—	1	—	2	1	18	1	59	2
	St. Julians	56	18	7	15	55	1	5	2	1	8	1	60	2	231	10
Total Valletta District ...		174	46	22	31	146	5	20	7	1	23	23	180	6	684	41
East District	Senglea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...
	Cospicua	—	—	—	—	—	—	—	—	—	—	—	—	—	—	...
	Vittoriosa	—	2	—	1	1	—	—	—	—	1	1	—	—	6	3
	Żabbar & Kalkara ...	97	168	105	78	242	83	55	3	5	24	177	254	23	1,314	49
	Żejtun	141	181	121	83	237	100	85	4	3	12	92	247	11	1,317	20
	Marsaxlokk	133	111	40	17	106	57	56	—	3	14	30	163	14	744	24
	Tarxien & Pawla ...	112	117	61	18	175	39	37	3	12	22	24	251	3	874	12
	Luqa	138	108	66	21	160	47	24	4	3	23	35	263	4	896	24
	Mqabba	118	62	5	13	67	15	16	2	8	57	—	74	8	445	18
	Qrendi	143	91	6	15	169	13	12	2	4	38	—	129	20	642	30
	Żurriek & Safi ...	450	329	16	36	283	51	24	5	12	43	7	418	32	1,706	69
	Gudja & Kirkop ...	137	122	54	22	198	80	43	2	6	20	49	247	18	998	42
	Birżebbuġa	190	185	38	41	216	95	74	1	15	18	38	287	46	1,244	80
	Għaxaq	105	80	13	19	154	43	38	1	2	13	11	121	10	610	48
Total East District ...		1,764	1,556	525	364	2,008	623	464	27	73	285	464	2,454	189	10,796	479
Central District	Naxxar Central ...	346	150	12	92	205	9	74	3	4	30	9	291	20	1,245	400
	Birkirkara and Sta. Vennera	384	136	23	104	386	15	82	7	4	40	23	348	13	1,565	54
	Għargħur	191	82	11	54	102	6	35	1	5	28	15	153	22	705	240
	Mosta	107	26	8	25	118	3	24	10	6	17	1	96	19	460	75
	Lija & Balzan... ...	119	14	9	23	121	2	17	30	2	19	7	109	—	472	5
	Attard	248	78	18	59	179	9	55	17	10	8	17	178	2	878	24
	Żebbuġ...	260	75	54	40	241	44	121	12	24	47	164	272	6	1,360	21
	Qormi	242	94	45	48	232	18	46	10	2	44	143	307	14	1,245	18
Total Central District ...		1,897	655	180	445	1,584	106	454	90	57	233	379	1,754	96	7,930	837
West District	Mdina	417	11	29	76	130	11	15	1	40	17	80	258	10	1,095	6
	Rabat	883	94	133	263	420	87	27	6	148	40	269	510	20	2,900	343
	Dingli	244	38	27	75	126	30	8	2	48	25	62	167	23	875	210
	Siġġiewi	445	92	116	229	275	145	198	40	28	34	216	466	66	2,350	292
	Mġarr	688	223	42	184	337	24	104	1	67	30	25	417	98	2,240	172
	Mellieħa	696	65	74	207	370	9	—	2	70	54	240	400	43	2,230	216
	St. Paul's Bay ...	655	54	76	92	303	8	6	2	36	29	147	434	28	1,870	115
	Naxxar, West... ...	161	42	18	29	90	2	29	1	8	25	4	101	10	520	347
Total West District ...		4,189	619	515	1,155	2,051	316	387	55	445	254	1,043	2,753	298	14,080	1,701
Total Malta		8,024	2,876	1,242	1,995	5.789	1,060	1325	179	576	795	1,909	7,141	589	33,500	3,058
Gozo	Victoria (Gran Fontana)	161	190	42	30	55	—	20	1	102	26	44	187	6	864	24
	Kirċem	180	235	38	37	47	—	11	1	82	20	13	226	18	908	37
	San Lawrenz	150	144	20	18	21	—	8	—	15	13	5	149	11	554	27
	Għarb & Għasri ...	254	237	38	35	88	—	16	—	55	17	18	206	16	980	106
	Żebbuġ...	207	338	81	64	45	1	6	2	153	57	7	365	12	1,338	25
	Xagħra...	162	148	64	31	62	1	1	6	270	42	23	238	32	1,080	38
	Nadur	104	142	59	44	33	1	—	4	402	60	40	196	45	1,130	56
	Qala	118	150	48	22	19	—	1	—	130	51	13	210	8	770	30
	Għajnsielem & Kemmuna	165	198	50	32	56	2	8	1	25	30	16	227	40	850	76
	Xewkija	70	48	27	24	30	11	30	—	11	9	—	91	45	396	80
	Sannat & Munxar ...	218	161	44	43	42	7	103	—	13	16	—	205	98	950	94
Total, Gozo...		1,789	1,991	511	380	498	23	204	15	1258	341	179	2,300	331	9,820	593
Grand total		9,813	4,867	1,753	2,375	6,287	1.073	1529	194	1834	1,136	2,088	9,441	920	43,310	3,651

TABLE V.

Estimated Quantities of Agricultural Produce—1935-36.

	Locality	Nature of produce and quantity of each											
		Wheat Quarters	Barley Quarters	Beans Quarters	Vetches-seed Quarters	Potatoes Tons	Onions Tons	Cumin-seed Cwts	Citrus fruits Dozen	Grapes Cwts.	Other fruits Cwts.	Vegetables Cwts.	Forages 'Soma' or load of 10 bundles
Valletta Dist.	Valletta	—	—	—	—	—	—	—	—	—	—	—	—
	Floriana	—	—	—	—	—	—	—	—	—	—	—	—
	Hamrun & Marsa ...	173	63	32	4	73	30	35	1,480	—	610	1,380	2,335
	Msida & Pietà ...	118	50	15	2	59	—	18	1,450	—	183	71	823
	Sliema	39	13	4	5	26	—	—	710	—	122	68	511
	St. Julians	157	85	26	27	96	7	17	1,420	23	488	69	1,795
Total Valletta District ...		487	211	77	56	254	37	70	5,060	23	1,403	1,588	5,464
East District	Senglea	—	—	—	—	—	—	—	—	—	—	—	—
	Cospicua	—	—	—	—	—	—	—	—	—	—	—	—
	Vittoriosa	—	9	—	2	1	—	—	—	—	59	63	—
	Żabbar & Kalkara ...	271	756	341	140	423	622	193	2,220	115	1,464	11,328	7,000
	Żejtun	395	815	393	149	417	750	298	2,885	69	732	5,894	6,845
	Marsaxlokk	372	499	130	31	188	428	196	—	70	854	1,920	4,392
	Tarxien & Pawla ...	313	527	198	32	307	293	129	2,255	276	1,342	1,536	8,306
	Luqa	386	486	215	38	400	353	84	3,040	68	1,403	2,240	7,900
	Mqabba	330	279	16	23	122	112	56	1,515	184	3,477	—	1,983
	Qrendi	400	410	20	27	296	97	42	1,490	92	2,318	—	3,567
	Żurrieq & Safi ...	1,260	1,401	52	65	495	383	85	3,780	281	2,623	448	10,984
	Gudja & Kirkop ...	383	549	176	40	354	600	151	1,510	138	1,220	3,136	7,119
	Birzebbuġa	532	833	123	74	383	713	259	680	345	1,098	2,432	7,940
	Għaxaq	294	360	42	34	269	323	133	725	46	793	704	3,300
Total East District ...		4,936	6,924	1,706	655	3,655	4,674	1,626	20,100	6,184	17,383	29,701	69,366
Central District	Naxxar Central ...	1,211	713	39	165	461	68	259	2,195	92	1,830	639	10,313
	Birkirkara and Santa Vennera	1,075	612	75	187	869	112	287	5,270	98	2,440	1,633	12,537
	Għargħur	669	390	36	97	230	45	122	710	115	1,708	1,065	5,254
	Mosta	428	130	26	45	266	22	84	7,965	138	1,037	72	3,489
	Lija & Balzan ...	400	68	29	41	302	15	60	22,500	47	1,159	497	3,880
	Attard	694	351	58	106	408	67	193	12,755	230	488	1,207	6,377
	Żebbuġ...	928	338	175	72	553	330	424	8,685	552	2,867	11,644	9,540
	Qormi	678	423	146	85	534	135	161	7,300	46	2,684	10,153	11,244
Total Central District ...		6,083	3,025	584	798	3,623	794	1,590	67,380	1,318	14,213	26,910	62,634
West District	Mdina	1,251	52	74	137	228	82	47	720	828	1,105	5,680	9,600
	Rabat	2,649	446	432	473	735	652	85	4,485	3,220	2,600	19,099	19,290
	Dingli	732	181	88	135	221	225	24	1,475	1,012	1,625	4,402	6,141
	Siġġiewi	1,265	416	377	412	619	1,087	693	29,850	644	2,210	15,336	17,034
	Mġarr	2,064	1,059	136	331	577	180	354	520	1,380	1,950	1,775	15,792
	Mellieħa	2,088	309	241	373	740	67	—	1,030	1,541	3,510	17,040	14,541
	St. Paul's Bay ...	1,965	258	247	166	682	60	19	950	830	1,885	10,437	15,636
	Naxxar, West... ...	564	210	59	52	160	14	97	655	184	1,625	284	3,747
Total West District ...		12,578	2,931	1,654	2,079	3,962	2,367	1,913	39,685	9,639	16,510	74,053	101,781
Total Malta ...		24,084	13,091	4,021	3,588	11,494	7,872	5,199	132,225	12,664	49,509	132,252	239,245
Gozo	Victoria (Gran Fontana)	483	735	137	54	110	—	70	750	3,774	1,690	3,036	6,732
	Kerċem	540	901	124	67	94	—	38	725	2,442	1,300	897	8,136
	San Lawrenz	450	552	65	33	42	—	28	—	666	845	345	5,364
	Għarb & Għasri ...	762	907	125	63	176	—	56	—	1,480	1,105	1,242	7,416
	Żebbuġ...	621	1,287	263	115	90	7	21	1,310	2,960	3,705	483	13,276
	Xagħra...	486	559	208	56	124	6	4	4,380	4,625	2,730	1,587	8,602
	Nadur	312	535	192	79	66	8	—	2,895	10,360	3,900	2,760	7,070
	Qala	354	571	156	40	38	—	3	—	4,810	3,315	901	7,662
	Għajnsielem & Kemmuna	495	775	163	58	112	14	27	685	925	1,950	1,104	8,444
	Xewkija	210	183	88	43	60	78	105	—	407	585	—	3,275
	Sannat & Munxar ...	654	620	143	78	84	51	361	—	481	1,014	—	7,383
Total, Gozo		5,367	7,625	1,664	686	996	164	713	10,745	32,930	22,139	12,355	83,360
Grand total... ...		29,451	20,716	5,685	4,274	12,490	8,036	5,912	142,970	45,594	71,648	144,607	322,605

TABLE VI.

Acreages and yields of the principal crops in 1936 as compared with the average acreages and yields during the preceding ten years.

Crop	Total Acreage 1936	Average acreage preceding ten years	Total Yield 1936	Yield per acre, 1936	Average yield per acre preceding ten years
Wheat	9,813	9,324	29,451 qrs.	3.0 qrs.	3.8 qrs.
Barley	4,867	6,075	20,716 qrs.	4.3 qrs.	5.0 qrs.
Beans	1,753	1,664	5,685 qrs.	3.2 qrs.	4.4 qrs.
Vetches...	2,375	2,478	4,274 qrs.	1.8 qrs.	*2.6 qrs.
Spring Potatoes	6,287	4,271	12,490 tons	2.0 tons	4.0 tons
Onions	1,073	1,172	8,036 tons	7.5 tons	7.2 tons
Cumin Seed	1,529	1,602	5,912 cwts.	3.9 cwts.	5.5 cwts.
Citrus Fruits	194	187	142,970 dozen	737.0 dozen	826.0 dozen
Grapes	1,834	1,737	45,590 cwts.	24.9 cwts.	66.4 cwts.
Other Fruits	1,136	1,035	71,648 cwts.	63.0 cwts.	70.1 cwts.
Vegetables	2,088	2,196	144,607 cwts.	69.3 cwts.	79.4 cwts.
Forages (excluding vetches)	9,441	9,658	322,605 "some"	34.2 "some"	60.0 "some"

* NOTE:—Average yield for 1934 and 1935. Yields before 1934 not available in qrs: since then recorded as "some" (loads).

TABLE VII.

Estimated values of Agricultural Produce grown in these Islands during 1934-35 and 1935-36.

	1934-1935								1935-1936							
				£	s.	d.		£ s. d.				£	s.	d.		£ s. d.
Wheat	22,391	qrs.	@	1	18	4	=	42,916 1 8	29,451	qrs.	@	2	1	8	=	61,356 5 0
Meslin or "Mischiato"	6,096	,,	,,	1	5	0	=	7,620 0 0	0,940	,,	,,	1	10	0	=	10,410 0 0
Barley	10,279	,,	,,	1	1	8	=	11,135 11 8	13,776	,,	,,	1	0	0	=	13,776 0 0
Straw (Wheat and Meslin) ...	320,500	nets	,,		2	3	=	36,056 5 0	211,000	nets	,,		2	6	=	26,375 0 0
Straw (Barley)	290,400	"some"	,,		1	6	=	21,780 0 0	194,700	"some"	,,		1	3	=	12,168 15 0
Beans	6,865	qrs.	,,	2	5	0	=	15,446 5 0	5,685	qrs.	,,	2	10	0	=	14,212 10 0
Vetches	4,741	,,	,,	1	18	4	=	9,086 18 4	4,274	,,	,,	2	0	0	=	8,548 0 0
Potatoes (Winter)	6,414	tons	,,	4	5	4	=	27,366 8 0	10,950	tons	,,	5	6	8	=	58,400 0 0
Potatoes (Spring)	11,104	,,	,,	10	2	8	=	112,520 10 8	12,490	,,	,,	8	0	0	=	99,920 0 0
Potatoes (Summer)	1,740	,,	,,	9	12	0	=	16,704 0 0	2,025	,,	,,	8	10	0	=	17,212 10 0
Onions	4,561	,,	,,	2	17	6	=	13,112 17 6	8,036	,,	,,	2	13	4	=	21,429 6 8
Cumin-seed	6,320	cwts.	,,	2	10	0	=	15,800 0 0	5,912	cwts.	,,	1	8	9	=	8,498 10 0
Citrus fruits	130,230	dozen	,,			6	=	3,255 15 0	142,970	dozen	,,			9	=	5,361 7 6
Grapes	84,574	cwts.	,,		6	5	=	27,134 3 2	45,594	cwts.	,,		7	0	=	15,957 18 0
Other fruits	74,261	,,	,,		8	0	=	29,704 8 0	71,648	,,	,,		9	0	=	32,241 12 0
Cotton lint	7,910	lbs.	,,			$5\frac{1}{4}$	=	173 0 $7\frac{1}{2}$	12,748	lbs.	,,			5	=	265 11 8
Cotton seed	212	cwts.	,,		5	7	=	59 3 8	335	cwts.	,,		8	4	=	139 11 8
Vegetables	150,858	,,	,,		8	9	=	66,000 7 6	144,607	,,	,,		9	3	=	66,880 14 9
Tomatoes...	91,810	,,	,,		2	8	=	12,241 6 8	28,336	,,	,,		3	$8\frac{1}{2}$	=	5,253 19 4
Forages	706 570	"some"	,,		3	6	=	123,649 15 0	322,605	"some"	,,		5	0	=	80,651 5 0
Maize	1,629	qrs.	,,	1	0	0	=	1,629 0 0	798	qrs.	,,	1	2	0	=	877 16 0
Melons and Water Melons ...	53,272	cwts.	,,		6	0	=	15,981 12 0	32,814	cwts.	,,		6	6	=	10,664 11 0
								£609,202 2 $5\frac{1}{2}$								570,601 3 7

TABLE VIII.

Average prices of Agricultural Produce during 1934-35 and 1935-36.

	1934-35.				1935-36.				
	£	s.	d.		£	s.	d.		
Wheat	1 13 4	to	2 3 4		1 15 0	to	2 5 0		per quarter.
Barley	18 4	„	1 1 8		0 16 8	„	1 1 8		do.
Meslin	1 6 8	„	1 16 8		1 7 6	„	1 18 4		do.
Beans	2 3 4	„	2 10 0		2 8 4	„	2 15 0		do.
Common Vetch	1 15 0	„	2 0 0		2 0 0	„	— — —		do.
Chickling Vetch	1 18 4	„	2 3 4		2 10 0	„	— — —		do.
Bitter Vetch	1 15 0	„	1 16 8		1 16 8	„	— — —		do.
Spring and Summer Potatoes	8 0 0	„	12 16 0		6 8 0	„	11 4 0		per ton.
Winter Potatoes	3 17 0	„	6 18 8		4 16 0	„	8 10 0		do.
Onions	2 15 0	„	5 0 0		2 5 0	„	4 16 0		do.
Cumin-seed	1 12 0	„	1 15 0		1 4 6	„	1 9 10		per cwt.
Citrus Fruits	5	„	10		6	„	1 6		per dozen.
Grapes	5 10	„	7 2		6 5	„	9 1		per cwt.
Figs (fresh)	2 2	„	4 6		2 6	„	5 3		do.
Prickly Pears	2 0	„	4 0		2 3	„	4 6		do.
Other Fruits	7 6	„	12 0		7 9	„	15 0		do.
Vegetables	5 9	„	13 0		5 10	„	14 8		do.
Cotton	5¼	„	— — —		5	„	— — —		per lb.
Forages...	2 3	„	4 0		2 6	„	6 6		per load of 10 bundles.
Wheat-straw	2 0	„	2 6		2 6	„	— — —		per net.
Barley-straw	1 3	„	1 8		1 2	„	1 4		per load of 10 bundles.
Firewood, thick	7 6	„	8 6		8 0	„	9 0		per pesata of 300 rt.
Firewood, in bundles ...	2 3	„	3 0		2 3	„	2 0		per load of 10 bundles.
Goat's milk	1 7½	„	2 0		1 9	„	2 2		per gallon.
Cow's milk	2 8	„	— — —		2 8	„	— 2 10		do.
Wine (common)	1 4	„	2 1		1 5	„	2 1½		do.
Cheese	11	„	1 4		10½	„	1 4		per lb.
Cheese (fresh)	4	„	6		4	„	6		do.
Beef	10¼	„	1 1½		10¼	„	1 1½		do.
Pork	10	„	1 0¼		10	„	1 0½		do.
Mutton	9¼	„	10½		9¼	„	10½		do.
Lamb	9¼	„	10½		9¼	„	10½		do.
Eggs	8	„	2 0		7½	„	2 3		per dozen.
Poultry	1 8	„	5 0		1 8	„	5 0		per head.
Rabbits	1 6	„	2 9		1 5	„	2 6		do.

Table IX.

Police returns of Livestock on the 31st. December, 1935, as compared with the returns on the 31st. December, 1934.

Livestock	31st. December, 1935			31st. December, 1934		
	Malta	Gozo	Total	Malta	Gozo	Total
Cattle:—						
Maltese breed ...	1,142	340	1,482	1,270	885	2,155
Foreign breeds ...	1,980	967	2,947	1,361	504	1,865
Ovines:—						
Goats	21,807	7,903	29,710	20,611	10 948	31,559
Sheep	9,908	5,935	15,843	10,060	6,065	16,125
Pigs	5,946	1,019	6,965	4,871	1,694	6,565
Donkeys:—						
Maltese breed ...	73	28	101	68	26	94
Foreign breeds ...	2,476	986	3,462	2,358	960	3,318
Horses	2,379	208	2,587	2,179	265	2,444
Mules	2,331	518	2,849	2,440	485	2,925

TABLE X. Return showing the Quantities and Value of Eggs imported into Malta during the five years ended 31st December, 1935.

Countries of origin	1931		1932		1933		1934		1935		Total Imports		Average Yearly Imports	
	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value
	Dozen	£	Dozen	£	Dozen	£	Dozen	£	Dozen	£	Dozen	£	Dozen	£
Egypt	153,560	5,175	240,260	7,345	357,260	8,035	411,960	9,396	474,190	11,167	1,637,230	41,118	327,446	8,223·6
Morocco	25,920	1,177	3,600	225	...	...	..	...	...	...	29,520	1,402	5,904	280·4
Syria	30,000	1,108	4,500	90	...	...	5,600	175	5,700	233	45,800	1,606	9,160	321·2
Italy	101,270	3,512	97,800	2,985	63,900	1,427	.	...	. .	...	262,970	7,924	52,594	1,584·8
Libya	74,030	3,350	26,470	1,395	23,640	953	20,972	821	3,440	176	148,552	6,695	29,710·4	1,339
Belgium	...	...	8,920	466	...	...	...	...	...	...	8,920	466	1,784	93·2
Greece	6,600	215	...	...	...	...	...	...	...	...	6,600	215	1,320	43
Scala Nuova ..	2,120	58	...	...	...	...	...	...	...	...	2,120	58	424	11·6
Turkey	9,600	252	46,735	1,593	72,520	2,892	192,150	6,296	62,880	2,267	383,915	13,300	76,783	2,660
United Kingdom	...	...	8	3	42	21	26	28	...	...	76	52	15.2	10·4
Bulgaria	...	...	100	4	3,360	133	8,520	257	..	...	11,980	394	2,396	78·8
Spain	...	...	6,000	100	...	...	...	...	...	...	6,000	100	1,200	20
Albania	...	...	.	...	35,760	1,487	95,794	2,629	52,260	2,023	183,814	6,139	36,720·8	1,227·8
Yugo-Slavia ...	...	...	...	...	103,280	3,697	17,460	454	25,140	668	146,180	4,819	29,236	963·8
Denmark	...	...	...	...	...	..	1,500	87	4,800	202	6,300	289	1,260	57·8
Netherlands ...	...	...	...	...	...	...	6,000	302	...	...	6,000	302	1,200	60 4
Poland	...	...	...	...	...	...	6,300	380	...	...	6,300	380	1,260	76
Lithuania ...	...	...	...	...	...	...	...	...	300	10	300	10	60	2
Total ...	403,100	14,847	434,393	14,206	659,762	18,645	766,312	20,825	629,010	16,746	2,892,577	85,269	578,515.4	17,053.8

N.B. The marking of imported eggs was started on the 15th August 1933, in terms of Act No. XXX of 1933.

TABLE XI.

Diagram showing relation between "Agricultural Exports" and "All other Exports", for the years 1929-1935,

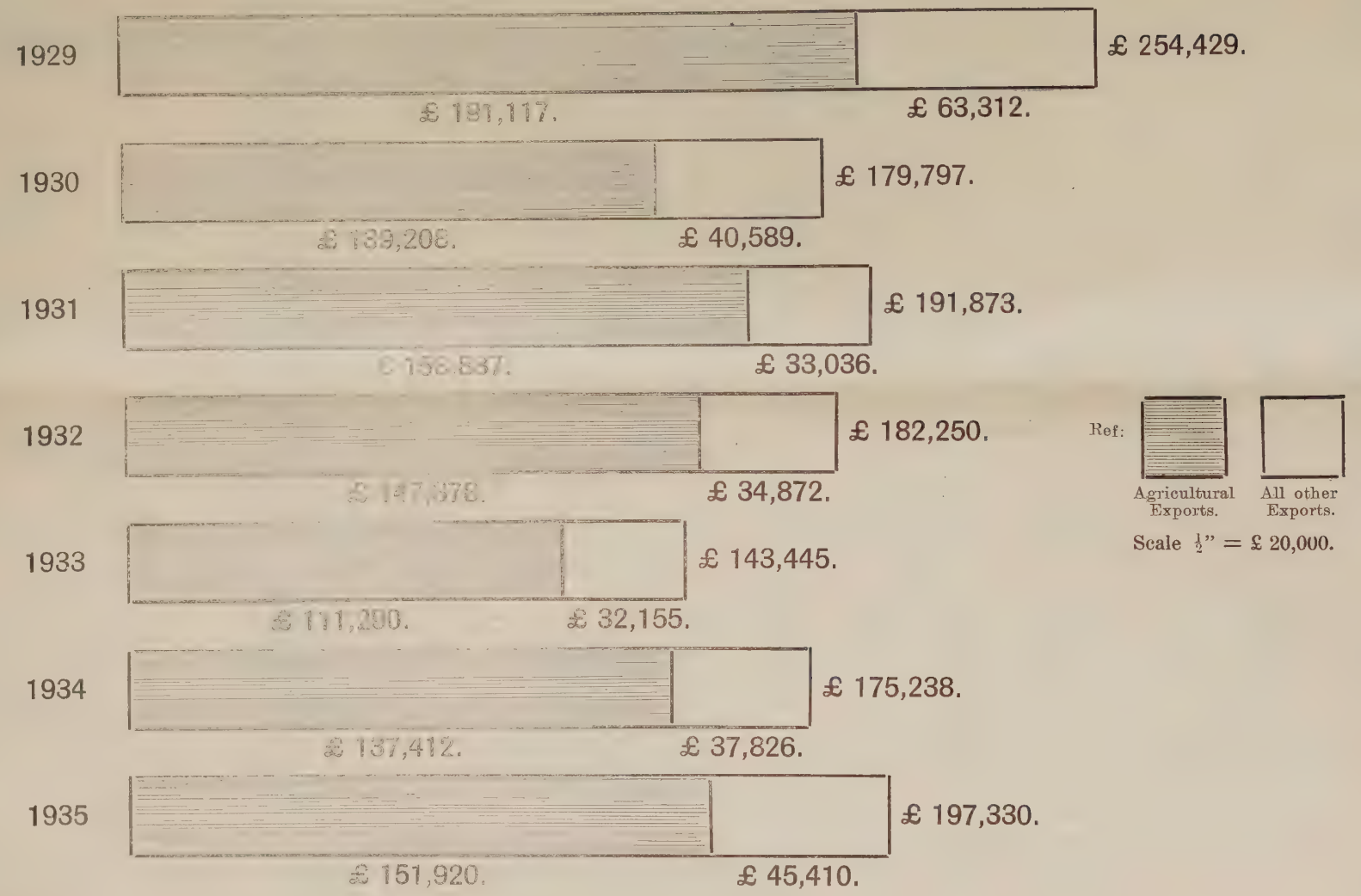

TABLE XII.

Return showing Quantities and Values of Agricultural Exports during the years 1930-35.

Article	Country of Final Destination		1930		1931		1932		1933		1934		1935	
			Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value
				£		£		£		£		£		£
Animals living:—														
Fowls Poultry	Libya	No.	88	18	...	...	...	...	...	...	...	...	...	...
Sheep and Swine	Tunis	,,	...	...	...	...	...	...	3	4	...	...	...	...
Cheese	Tunis	Cwts.	35	104	24	60	1	3	4	13	11	16	6	49
	Italy	,,	...	...	...	...	...	...	...	...	2	5	...	...
	Libya	,,	...	...	...	...	...	...	...	...	2	6	...	...
	Total ...	... ...	35	104	24	60	1	3	4	13	15	27	6	49
Eggs	United Kingdom...	Doz.	...	...	...	...	3,300	135	100	5	...	...	...	...
	Italy	,,	...	...	...	...	60	3	...	...	...	...	...	...
	Total ...	... ...	...	...	...	...	3,360	138	100	5	...	...	...	...
Fruits (fresh or dried):—														
Oranges and Mandarines	United Kingdom...	Doz.	6,832	408	1,324	82	1,209	91	6,492	234	1,877	126	1,814	143
	France	,,	70	3	...	...	...	...	...	...	...	...	...	...
	Tunis	,,	...	...	...	...	...	...	...	...	600	24	...	...
	Total ...	... ...	6,902	411	1,324	82	1,209	91	6,492	234	2,477	150	1,814	143
Grapes	United Kingdom...	Cwts.	...	...	...	...	...	...	...	...	...	...	5	14
Melons	United Kingdom...	,,	...	...	...	...	...	...	...	...	...	...	105	38
	Libya	,,	...	...	...	...	...	...	...	...	...	...	34	10
	Total ...	... ...	...	...	...	...	...	...	...	...	...	...	139	48
Other fruits	Italy	Value	...	67	...	90	...	...	...	...	...	180	...	...
	Libya	,,	...	39	...	...	...	...	...	...	...	51	...	...
	Tunis	,,	...	10	...	42	...	...	...	...	...	111	...	...
	United Kingdom...	,,	...	...	...	...	...	93	...	...	...	...	...	45
	Greece	,,	...	...	...	...	...	...	...	...	...	...	...	66
	Turkey	,,	...	...	...	...	...	...	...	...	...	...	...	128
	Total ...	... ...	...	116	...	132	...	93	...	...	...	342	...	239
Pulse:—														
Kidney Beans...	Belgium	Cwts.	...	...	...	...	...	...	148	60	...	...	...	...
Tomato Sauce and extracts of tomatoes	Italy	,,	...	...	...	...	...	...	...	...	...	...	148	148
	Tunis	,,	...	...	6	8	...	...	...	...	292	280	...	...
	Brazil	,,	955	807	...	...	...	...	...	...	...	...	...	...
	Spain	,,	20	15	...	...	...	...	...	...	...	...	...	...
	Ceylon	,,	...	...	2	3	...	...	...	...	...	...	...	...
	Cyprus	,,	...	...	...	...	438	370	40	40	...	...	160	145
	Kenya	,,	...	...	...	...	...	...	...	...	7	20	...	...
	Egypt	,,	...	...	...	...	...	...	...	...	...	...	6	7
	Total ...	... ...	975	822	8	11	438	370	40	40	299	300	314	300

TABLE XII.— *cont.*

Return showing Quantities and Values of Agricultural Exports during the years 1930-35.

Article	Country of Final Destination		1930		1931		1932		1933		1934		1935	
			Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value
				£		£		£		£		£		£
Tomatoes (tinned)	United Kingdom...	Cwts.	...	...	...	...	...	...	...	...	...	...	307	212
Vegetables:—														
Garlic	Tunis	,,	...	...	...	...	18	9	87	39	...	...	...	...
	Libya	,,	...	...	...	...	...	...	...	...	20	3	...	...
	United Kingdom ...	,,	...	...	...	...	120	70	...	...	...	...	...	...
	Belgium	,,	...	...	...	...	10	5	...	...	...	...	...	...
	Total ...	... ...	...	...	...	...	148	84	87	39	20	3	...	...
Onions	United Kingdom...	Cwts.	5,385	663	7,096	1,442	12,498	3,064	2,510	414	1,526	212	1,130	295
	Austria	,,	4,321	658	...	...	...	...	...	...	...	...	...	...
	Belgium	,,	400	60	1,326	400	1,027	442	3,055	132	...	...	809	263
	Denmark	,,	146	14	94	25	...	...	...	...	...	...	...	...
	Germany	,,	240	52	...	...	...	...	...	...	195	28	...	...
	Italy	,,	11,299	2,227	380	175	8,267	2,018	...	...	400	45	...	...
	Libya	,,	2,140	318	590	129	130	27	867	162	2,290	307	325	57
	Netherlands ...	,,	19,254	2,829	15,296	3,618	42,084	7,846	13,672	1,027	16,981	1,882	1,134	326
	Norway	,,	545	115	316	82	841	186	452	88	1,860	302	2,544	897
	Sweden	,,	...	...	...	...	...	...	...	...	5,271	736	5,934	1,928
	Tunis	,,	6,145	1,451	3,812	913	3,447	872	3,281	537	170	20	246	30
	Ceylon	,,	...	...	...	...	...	...	...	...	416	83	...	...
	Palestine	,,	...	...	...	...	...	...	...	...	40	9	...	...
	Egypt	,,	...	...	...	...	...	...	...	...	60	10	...	...
	Morocco	,,	...	...	...	...	...	...	...	...	400	68	...	...
	Switzerland ...	,,	...	...	...	...	...	...	...	...	500	42	200	44
	Aden	,,	...	...	...	...	...	...	...	...	...	...	114	23
	Total ...	... ...	49,875	8,387	28,910	6,784	68,294	14,455	23,837	2,360	30,109	3,744	2,436	3,863
Potatoes	United Kingdom...	Tons.	...	...	496	5,172	1,448	14,701	648	6,842	1,457	12,052	1,496	18,700
	Belgium	,,	16	100	164	1,520	310	3,612	665	3,938	948	9,848	820	8,640
	Germany	,,	1,081	9,849	604	6,010	538	6,174	342	2,236	222	2,164	70	1,407
	Hungary	,,	70	395	...	...	...	...	...	...	...	...	...	...
	Italy	,,	514	4,965	300	3,714	296	3,581	169	1,666	204	2,436	168	3,175
	Netherlands ...	,,	6,083	55,201	7,604	78,792	6,619	67,731	7,140	58,604	8,797	73,944	6,294	73,209
	Switzerland ...	,,	46	390	38	345	61	645	54	442	...	...	...	...
	Tunis	,,	772	4,330	...	...	411	2,647	102	460	...	...	...	...
	Ceylon	,,	1,799	12,060	1,841	13,350	690	5,526	1,048	5,619	487	3,313	401	2,862
	Austria	,,	10	55	...	...	20	180	...	...	...	...	30	330
	Egypt	,,	50	413	...	...	...	...	...	...	30	206	...	...
	Greece	,,	8	32	...	...	...	...	...	...	...	...	...	...
	British India ...	,,	3	20	...	...	...	...	...	...	125	1,113	...	...
	Spain	,,	...	...	895	6,332	...	...	...	...	...	...	...	...
	Carried forward ...	... ...	10,452	87,810	11,942	115,235	10,393	104,797	10,168	79,357	12,270	105,076	9,279	108,323

TABLE XII.—*cont.*

Return showing Quantities and Values of Agricultural Exports during the years 1930-35.

Article	Country of Final Destination		1930		1931		1932		1933		1934		1935	
			Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value
	Brought forward...	... ...	10,452	£ 87,810	11,942	£ 115,235	10,393	£ 104,797	10,168	£ 79,357	12,270	£ 105,076	9,279	£ 108,323
Vegetables—cont. Potatoes (cont.)	France	Tons	...	...	...	...	32	257	...	...	1	7	...	...
	Sudan	,,	...	...	...	...	...	...	1	7	...	...	...	...
	Libya	,,	...	...	...	...	...	...	1	4	...	...	...	...
	Aden	,,	...	...	...	...	...	...	...	...	18	100	...	...
	Palestine	,,	...	...	...	...	...	...	...	...	9	41	...	...
	Morocco	,,	...	...	...	...	...	...	...	...	1	8	...	...
	Yugo Slavia ...	,,	...	...	...	...	...	...	...	...	11	119	...	...
	Other Ships' Stores	,,	...	...	...	...	...	...	...	...	3	19	...	...
	Total ...	... ...	10,452	87,810	11,942	115,235	10,425	105,054	10,170	79,368	12,313	105,370	9,279	108,323
Tomatoes	Italy	Value	...	...	...	...	...	...	...	8	...	...	...	...
Other vegetables	United Kingdom ...	Tons	...	...	...	...	...	...	...	4	...	2	...	...
	Tunis	,,	...	...	...	...	...	...	...	26	...	25	...	10
	Libya	,,	...	...	...	...	...	...	...	...	...	25	...	...
	Total ...	... ...	...	...	...	...	...	...	...	30	...	52	...	10
Bones and hoofs	United Kingdom ...	Cwts.	...	...	...	...	...	...	41	8	...	...	...	...
	Germany	,,	752	265	...	...	...	...	...	...	...	...	...	...
	Italy	,,	1,417	441	410	87	102	18	4,450	960	1,206	316	1,783	401
	Netherlands ...	,,	...	...	3,830	905	...	...	...	...	780	152	...	...
	Total ...	... ...	2,169	706	4,240	992	102	18	4,491	968	1,986	468	1,783	401
Cotton (raw)	United Kingdom ...	Cwts.	...	...	...	...	...	...	149	349	196	490	269	658
	Italy	,,	...	...	...	...	...	...	314	687	...	...	...	...
	Germany	,,	...	...	...	...	...	...	34	20	...	...	...	...
	Total ...		...	...	...	...	...	...	497	1,056	196	490	269	658
Cumin seed	United Kingdom ...	Cwts.	50	150	...	...	140	182	100	229	100	226	450	944
	Trinidad	,,	20	46	40	91	...	...	...	...	40	50	117	283
	Algiers	,,	...	...	...	...	...	...	...	...	30	50	...	...
	Brazil	,,	...	...	...	...	...	...	...	...	737	1,766	351	765
	Chili	,,	197	565	282	431	502	739	90	125	800	1,661	837	1,952
	Egypt	,,	46	120	845	1,232	502	612	806	930	...	...	...	...
	Germany	,,	1,466	3,405	1,623	3,522	1,903	1,993	1,611	2,226	1,136	2,691	271	631
	Italy	,,	266	607	61	130	196	286	350	697	205	585	100	266
	Libya	,,	59	103	34	34	...	...	10	16	73	144	27	53
	Netherlands ...	,,	2,433	5,951	2,092	3,900	788	918	1,117	1,730	782	1,733	856	1,720
	Norway.	,,	140	326	116	213	50	67	110	240	100	269	311	655
	South America ... (country unspecified)	,,	...	...	...	...	...	...	...	...	...	...	188	410
	Tunis	,,	69	179	138	283	25	26	121	198	82	183	240	424
	U.S. America ...	,,	...	...	102	200	...	...	255	461	366	1,040	...	...
	Carried forward...	... ...	4,746	11,452	5,333	10,036	4,106	4,823	4,570	6,852	4,451	10,398	3,748	8,103

TABLE XII.—*cont.*

Return showing Quantities and Values of Agricultural Exports during the years 1930-35.

Article	Country of Final Destination		1930		1931		1932		1933		1934		1935	
			Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value
				£		£		£		£		£		£
	Brought forward ...	... ...	4,746	11,452	5,333	10,036	4,106	4,823	4,570	6,852	4,451	10,398	3,748	8,103
Cumin seed—cont.	France	Cwts.	950	2,076	556	890	1,353	1,328	362	500	260	444	1,069	2,024
	Sweden	,,	15	40	...	...	...	...	...	...	20	48	40	93
	Argentine Republic	,,	639	1,687	427	761	596	839	163	260	160	477	283	616
	Peru	,,	70	195	...	...	...	...	...	...	...	...	40	72
	Mexico	,,	...	...	41	85	...	...	...	...	...	...	...	...
	Roumania	,,	...	...	151	320	...	...	...	...	...	...	40	90
	Ceylon	,,	...	...	...	...	382	554	...	...	...	...	...	...
	Bolivia	,,	..	...	...	...	2	2		...	...	...	...	...
	Portugal	,,	...	...	..	...	100	141	...	...	...	...	...	...
	Spain	,,	...	...	103	200	100	110	102	100	...	...	...	...
	Belgium	,,	...	...	...	...	...	...	21	30	...	...	20	40
	Denmark	,,	...	...	...	...	...	...	10	15	...	...	...	...
	Equador	,,	...	...	...	...	...	...	...	...	113	300	...	...
	Australia	,,	...	...	...	...	...	...	...	...	...	...	20	44
	British-West Indies	,,	...	...	...	...	...	...	...	...	...	...	25	54
	Czecho-Slovakia ...	,,	...	...	...	...	...	...	...	...	...	...	28	92
	Venezuela	,,	...	...	...	...	...	...	...	...	...	...	20	44
	Total ...	... ...	6,420	15,450	6,611	12,292	6,639	7,797	5,228	7,257	5,004	11,667	5,333	11,342
Hides and Skins (raw or dried) ...	United Kingdom...	Cwts.	134	430	195	445	56	90	18	103	43	72	131	259
	Belgium	,,	12	27	...	...	16	190	21	267	23	223	...	...
	France	,,	237	722	357	893	769	1,727	187	955	97	460	74	530
	Germany	,,	...	...	276	756	19	20	5	15	7	24	...	...
	Greece	,,	553	1,472	363	510	3,142	4,214	2,301	3,162	2,348	3,337	299	439
	Italy	,,	7,436	18,822	4,938	11,918	3,614	6,502	4,524	7,681	2,808	4,857	8,111	7,882
	U.S. America ...	,,	...	...	...	...	...	...	...	...	...	...	415	1,584
	Netherlands ...	,,	15	65	3	15	...	...	...	...	...	...	70	106
	Turkey	,,	243	405	754	1,163	391	501	290	427	240	363	2,769	4,458
	Syria	,,	...	...	...	...	23	34	...	...	...	...	...	...
	Spain	..	...	...	...	...	...	...	...	...	...	...	...	...
	Libya	,,	...	...	...	...	...	...	558	800	18	180	186	262
	Tunis	,,	...	...	...	...	...	...	...	...	30	76	...	...
	Czecho-Slovakia...	,,	...	...	...	...	...	...	...	...	...	...	96	299
	Egypt	,,	...	...	...	...	...	...	...	...	...	...	66	100
	Hungary	,,	...	...	...	...	...	...	...	...	...	...	40	60
	Yugo-Slavia ...	,,	...	...	...	...	...	...	...	...	...	...	26	40
	Total ...	... ...	8,630	21,943	6,886	15,700	8,030	13,278	7,904	13,410	5,614	9,592	12,283	16,019
Tallow	Italy	Cwts.	987	1,411	4,094	4,394	2,716	3,369	2,294	2,338	3,945	3,652	1,421	1,712
	United Kingdom ...	,,	...	...	1,017	1,428	...	...	6	7	596	545	616	820
	Netherlands ...	,,	...	...	22	35	...	...	...	...	40	100	...	...
	Total ...	... ...	987	1,411	5,133	5,857	2,716	3,369	2,300	2,845	4,581	4,297	2,037	2,532

TABLE XII.—*cont.*

Return showing Quantities and Values of Agricultural Exports during the years 1930-35.

Articles	Country of Final Destination		1930		1931		1932		1933		1934		1935	
			Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value
				£		£		£		£		£		£
Tar	Egypt	Cwts.	505	112	...	...	...	...	...	...	...	...	...	...
	Tunis	,,	...	...	...	...	2,685	464	100	25	...	...	94	38
	Belgium	,,	...	...	...	...	524	58	426	42	...	...	...	..
	Italy	,,	...	...	...	...	...	...	20	5	...	...	...	...
	Total ...	... ...	505	112	...	...	3,209	522	546	72	...	...	94	38
Horns and hoofs	France	Cwts.	...	...	...	...	157	50	...	...	...	...	...	...
	Italy	,,	...	...	...	...	20	7	...	...	...	...	...	...
	Total ..	... ...	...	...	...	...	177	57	...	...	...	...	...	...
Squills	United Kingdom ...	Cwts.	...	...	...	...	...	...	20	20	195	114	197	163
Wool (raw)	United Kingdom ...	Cwts.	...	...	...	...	...	...	...	...	...	...	616	1,090
Animals living:– Horses	Tunis	No.	1	12	4	230	...	...	1	20	...	..	...	...
	France	,,	...	...	10	55	...	...	...	...	...		...	...
	Total ...	... ...	1	12	14	285	...	...	1	20	...	...	...	...
Donkeys	Tunis	No.	3	22	...	...	3	17	...	...	...	...	...	...
	United Kingdom ...	,,	...	...	...	...	...	...	...	...	...	...	1	10
	Total ...	... ...	3	22	...	...	3	17	...	...	...	...	1	10
Goats	Cyprus	No.	12	35	...	...	...	...	...	...	...	...	...	...
	Albania	,,	...	...	...	...	...	...	...	...	...	40	...	...
	Total ...	... ...	12	35	...	...	...	...	...	...	...	40	...	...
Mules	Tunis	No.	26	351	7	65	...	...	...	...	...	...	...	...
	France	,,	...	...	5	29	...	...	...	...	...	...	...	...
	Total ...	... ...	26	351	12	94	...	...	...	...	..	...	...	..
Unenumerated	Italy	No.	...	...	...	...	...	...	...	...	...	...	...	24

TABLE XII.—*cont.*

Return showing Quantities and Values of Agricultural Exports during the years 1930-35

Articles	Country of Final Destination		1930		1931		1932		1933		1934		1935	
			Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value	Quantities	Value
				£		£		£		£		£		£
Foods for animals—Bran	United Kingdom ..	Cwts.	478	106	...	...	...	...	6,552	1,275	1,680	420	16,664	3,758
	Germany	,,	...	...	...	...	...	...	...	...	...	...	608	187
	Italy	,,	2,806	495	3,457	613	137	31	75	13	591	139	281	61
	Libya	,,	3,516	780	2,829	700	6,140	1,858	3,586	801	735	177	8,502	1,811
	Tunis	,,	...	...	...	...	338	85	...	...	...	...	...	...
	France	,,	...	...	...	...	...	...	3,156	820	...	...	...	...
	Egypt	,,	...	...	...	...	...	...	...	...	...	...	497	125
	Total ...	... ...	6,800	1,381	6,286	1,313	6,615	1,974	13,369	2,909	3,006	736	26,552	5,942
Grain—Barley	Italy	Cwts.	260	72	...	...	...	...	...	...	...	...	...	...
Pulse—Beans	Italy	,,	39	45	...	...	40	50	47	45	...	...	...	...
	Libya	,,	...	...	...	...	15	8	67	55	6	6	...	...
	Tunis	,,	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	... ...	39	45	...	...	55	58	114	100	6	6	...	...
Wine in Bottles—(Still)	United Kingdom ...	Galls.	...	...	...	...	...	...	200	41	20	14	5	3
	Greece	,,	...	...	...	...	...	...	21	18	...	...	...	...
	Turkey	,,	...	...	...	...	...	...	12	13	...	...	...	...
	Total ...	... ...	...	...	...	...	...	...	233	72	20	14	5	3
Honey	United Kingdom ...	Cwts.	...	...	...	...	...	...	...	...	...	...	3	20
	Egypt	,,	...	...	...	...	...	...	...	...	...	...	228	235
	Libya	,,	...	...	...	...	...	...	...	...	...	...	68	151
	Total ...	... ...	...	...	...	...	...	...	...	...	...	...	299	406

PLANT PATHOLOGY.

The following report has been principally compiled from the Registers of the Plant Pathology Branch as they were left by the late Mr. Paul Borg who died suddenly on the 7th May, 1936.

Imports subject to Phytopathological Restrictions.

There were 1,096 imports subject to Plant Pathology restrictions during the year as shown in the following table.

Imports	No. of consignments	Quantity
Citrus Fruits	531	662,922 dozens
Seed Potatoes	249	49,086 bags of 2 cwts. each
Table Potatoes		2,677,404 kilos
Onions	27	2,000 bags, 10 parcels and 3 cases
Garlic	53	1,216 crates, 1,934 bags, 4 baskets and 3 parcels
Fruit Trees and ornamental shrubs	150	———
Flowering bulbs	84	———
Fruits	84	———
Flowers	15	———
Leaf mould	6	———

There were in addition 39 parcels received through the Post and Customs Authorities which were not claimed or were refused by the consignees. These were handed over to the Department for destruction.

Five parcels of ornamental plants and flowering bulbs coming from countries widely infected with Colorado Beetle, *Leptinotarsa decemlineata*, where withdrawn by the Department and destroyed. There were also 439 consignments of agricultural produce accompanied by the prescribed certificates which were released for importation into these Islands, after examination and registration of documents.

Citrus fruits were imported mostly from Sicily and Spain but there were parcels from South Africa, Australia, Jamaica, Rhodesia, Palestine, California, Tripoli, Tunis and Syria. The amounts imported were estimated as follows :—

Oranges	539,582	dozens
Lemons	114,637	,,
Mandarines	5,483	,,
Grape Fruit	3,420	,,
Total	663,122	dozens.

Nine consignments of oranges and grape fruit imported from Jaffa and Haifa, infested with the Red Scale of Florida (*Chrysomphalus ficus*) were withdrawn by the Department and destroyed. These consignments consisted of 4 cases, 2 parcels and 2 baskets of oranges and 5 cases, 2 parcels and 2 baskets of grape-fruit.

97 crates of mandarines imported from Alexandria equally infested with *Chrysomphalus ficus* were shipped back to the place of origin.

Potatoes were imported as follows :—

a) *For table use* : 2,677,404 kg. These were imported from Holland, Bulgaria, Belgium, the United Kingdom, Irish Free State, Italy, Cyprus, Yugoslavia, Hungary and Spain.

b) For seed purposes :

1) *Champion* — 35,325 bags from Northern Ireland and 699 bags from the Irish Free State.

2) *Up-to-date* — 5,977 bags from Northern Ireland, 410 bags from the Irish Free State and 200 from Scotland.

3) *Northern Invincible* — 3,460 bags from Northern Ireland.

4) *Eigenheimer* — 900 bags, and 10 bags *Binje* from Holland.

Total : 49,086 bags of 2 cwts. each.

The seed potatoes contained a fairly high percentage of tubers affected with blight and wet rot.

Further details were given by the Controller of Agricultural Exports in the Annual Report for 1934-35.

Onions were imported from Egypt, garlic from Egypt and Italy, and fruit trees, ornamental plants, flowering bulbs, fruits, flowers and leaf mould were imported from Great Britain, Italy, Luxemburg, Belgium, Palestine, Lybia, Tunis, Egypt and Gibraltar.

An unkown scale insect was found on plants imported from Port Said, and a new variety of ant on leaf mould imported from Belgium. Samples were sent to the Imperial Institute of Mycology for determination. The hymenoptera was found to be a cynified *Biorluza pallida* and the scale insect *Astreatecamium pustulans*. The mould was fumigated with carbon bisulphide and the plants were burned.

Icerya Purchasi Mask.

This scale insect is now well kept in check by its natural enemy the *Novius cardinalis*. The breeding of this Australian ladybird was successful this year on account of the mild weather during the winter. The ladybird is now thoroughly naturalised in these Islands, and keeps the pest efficiently in check. Many outbreaks reported to this Department proved on examination to be under the control of the *Novius cardinalis*. 93 colonies of this ladybird were distributed throughout Malta and Gozo.

Fruit Fly.

(Ceratitis capitata Wied).

A campaign for the control of the fruit fly by means of traps was started during the first week of June 1935, and continued until December. The traps being used are of the special type designed by Prof. Filippo Silvestri of the Laboratory of Portici (Naples) and are similar to the common glass traps for catching the domestic fly : 50% of the traps are 11 cm. high, 8 cm. wide at the base and 5 cm. at the neck, with the base shaped like a truncated cone terminating in an opening of 1½ cm. wide to allow for the free entrance of the insects, and at the same time making it almost impossible for them to come out. The neck is closed by means of a zinc screw cork through which passes a galvanized wire by which the bottle is hung to a branch of the tree.

The bait used is a proprietary substance called Clensel and the results obtained to date have been quite satisfactory. Where fly traps were used first on stone-fruit trees and then on citrus trees, the crop was saved almost 100%, while where no traps were used the crop was heavily infested as usual. The damage caused by the fly was most noticeable in the neighbourhood of the prickly-pear plantations, where windfalls are generally left to rot under the trees. These prickly-pear plantations, which are scattered all over Malta and Gozo, serve as breeding grounds for the fly to the great detriment of the cultivation of fruit-trees in Malta.

Besides 2,000 traps sold by a local firm, 17,685 bottle traps were imported and distributed on loan by this Department, the distribution being as follows:—

11,849 amongst 813 growers in Malta
4,319 amongst 223 growers in Gozo
950 to Public Gardens and Plantations in Malta
436 in Store, Malta
131 in Store, Gozo

17,685 Total number of traps distributed.

Of the different baits suggested (vinegar, molasses, bran-water, etc.) *Clensel* (1 part in 20 parts water) has given the best results. *Clensel* saves time and work in preparing and keeps longer (7 to 10 days) in the traps. Moreover the attractive power of this bait is greatly superior to that of any other, and the fly can in no way resist its scent. 41 drums of 5 gallons each and 48 bottles of 8 ozs. each were distributed free of charge in Malta and Gozo during the first year of the campaign.

The traps were first used on fruit-trees and afterwards on citrus-trees, 1 trap being generally sufficient for three or four trees. The number of trees treated, not including those in the Public Gardens and Plantations, amounted to 63,558 trees of which 36,431 were citrus trees.

As regards the number of flies caught, it is difficult to estimate with any degree of accuracy the number of flies per trap. From tests made it appears that a conservative estimate would be 45-50 flies per 8-10 days between June and November. Fewer flies were caught in the early season as compared with the autumn season (September-November). Some traps caught as many as 500 flies in 3-5 days.

An intensive propaganda was carried out by the staff amongst farmers and growers in connection with the fruit fly campaign for the removal and destruction of windfalls and other rotten fruits. Burning or burying in quick lime was suggested as the best action.

Departmental activities in the field.

The following treatments and demonstrations were carried out during the year, mostly on private lands:—

(a) Spraying of potatoes with Bordeaux mixture at the Government Experimental Farm, Għammieri, and at Buskett — 207¾ tummoli;

(b) Treatment of pear and apple trees for *Cerambix meli* at Buskett — 720 trees. This treatment included the brushing and whitewashing of trunks with sulphate of iron;

(c) Spraying with Volck solution for scale insects in public gardens and nurseries — 2,025 citrus trees and 140 rosebushes;

(d) Spraying of citrus and other trees with Volck solution for scale insects in private gardens — 10,885 citrus trees, 723 other fruit-trees and 2,164 rose-bushes;

(e) Treatment of vines with Bordeaux mixture and dusting with powdered sulphur in private gardens — 36 tummoli;

(f) Treatment of citrus trees for *Armillaria mellea* in private gardens — 150 trees;

(g) Treatment of broad beans with Bordeaux mixture and nicotine-iodine-cresol spray at Experimental Farm — 11 tummoli (8 sprays);

(h) Spraying of trees with nicotine-iodine-cresol spray in private gardens — 1,002 citrus trees, 4 other fruit trees and 98 rose trees;

(i) Treatment of rose trees for black spot in private gardens — 298 plants;

(j) Treatment of Chrysomphalus with nicotine-iodine-cresol spray at Gżira public gardens — 3 treatments;

(k) Treatment with Shirlan Ag. for Mildew at San Antonio Public Gardens — 409 rose-trees;

(l) Treatment of vine rootlings in Government nurseries — 2,800 plants;

(m) Treatment of potatoes with Blighty Powder at the Experimental Farm — 1,200 square feet — 12 treatments;

(n) Treatment of soya beans with sulphur lime mixture at Experimental Farm — 6½ tummoli of land — 6 sprays;

(o) Treatment of tomatoes with ½ strength Bordeaux mixture at Experimental Farm — 6½ tummoli — 6 sprays;

(p) Treatment of fruit-trees for *Scalytus rugulosus* with K_2S in private gardens — 51 growers;

(q) Treatment of fruit-trees with Bordeaux mixture at Buskett — 899 trees;

(r) Treatment of fruit-trees with sulphate of iron at Buskett — 2,493 fruit-trees;

(s) Treatment with garden naphthalene for *Grillotalpa vulgaris* — 2½ tummoli;

(t) Treatment of citrus trees, etc., with "Pysect" for aphides in private gardens — 300 orange, 31 lemon and 14 fruit-trees, and 145 roses;

(u) Treatment of citrus trees for Lichens with sulphate of iron and lime at Buskett and San Antonio Private Gardens — 1,297 trees;

(v) Demonstrations in experimental vineyards, spraying with sulphate of copper and dusting with powdered sulphur — 31½ tummoli.

APPENDIX I.

Report of the Director of the Experimental Farm and Agricultural Organiser.

1. INTRODUCTION.

The livestock section has called for the most attention, particularly owing to the increased activity in poultry rearing and pig breeding and to the absence in England on training of the livestock and poultry officers who have now taken up their duties. The field crop section has also needed particular supervision on account of lack of trained personnel: in this connection the Horticulturist has now been sent for two years' training abroad, one year of which is to be spent in England and one in Italy.

2. POTATO VARIETY TRIALS.

(a) A trial was made with five small samples of potatoes obtained from the Government of Northern Ireland through the courtesy of the Controller of Agricultural Exports, these varieties being compared with the Champion and Up-to-date varieties. The results of this experiment are tabulated below; each plot measured 15 ft. by 10 ft. and was newly manured. The tubers of this and the following experiment were planted on the 12th February, 1936, and reaped on the 10th June, 1936.

The variety A. 13 which was stated by the Ministry of Agriculture of Northern Ireland to be a result of a very recent breeding and to be showing great promise, is seen to have cropped very satisfactorily and, in addition, the shape was good; the type (long white flesh) would seem to be very suitable for shipment from Malta to the United Kingdom. Further trials of this variety are desirable.

Of the other varieties on trial only Ballydoon gave a fair yield and with this variety the shape was much more round than kidney: in view of the good results being obtained with the Arran Banner variety locally the need is more for a kidney shaped white fleshed variety, as a possible alternative to the Up-to-date variety.

Variety	Approximate number of plants	Yield in rotolo				Yield in kantars per tumolo
		Grade A. Medium	Grade B. Large	Grade C. Small	Total Yield	
A 13	125	17¼	...	5½	22¾	18·35
Ballydoon ...	120	12¼	...	3½	15¾	12·70
Dunbar Yeoman ...	110	5½	...	3¼	8¾	7·06
Clarke 378 ...	140	3½	...	1¼	4¾	3·83
No. 14/31	77	4½	...	2	6½	5·24
Up-to date ...	40	11½	½	1¾	13¾	11·10
Champion ...	58	11	3¾	2¾	17½	14·12

(b) The following experiment was carried out with three varieties, the Champion seed being tested dry packed and wet packed.

No. 14/31 is a cross between Champion and Alpha, both very good yielders in these Islands. However, the results obtained were inconclusive, as might be expected since only sound seed was planted. The yields obtained are tabulated below :—

Variety	Approximate number of plants	Yield in rotoli				Yield in kantars per tumolo
		Grade A. Medium	Grade B. Large	Grade C. Small	Total Yield	
Up-to-date ...	222	61½	9	8	78½	7·94
Campion (dry pack)	361	82¼	6	18	106¼	10·75
No. 14/31... ...	363	22¾	...	8	30¾	3·11
Champion (net pack)	557	113¼	4	18	135¾	13·70

3. WHEAT.

The object of this experiment was to observe the effect of fractional spreading in increasing doses of the nitrogen fertilisers during growth.

Five varities of wheat were sown. For each variety two plots were allotted, plot A, which served as control, and plot B. Each plot measured 7,800 sq. ft. In plot A the dressing per tumolo consisted of 15 rotoli of sulphate of ammonia, 15 rotoli nitrate of soda, 30 rotoli of sulphate of potash and 70 rotoli of superphosphate. In plot B the same quality of fertilisers was spread with the exception of the nitrate of soda which it was proposed to spread every fortnight starting from January 2nd; owing to the very dry season, however, it was not always possible to distribute the nitrate of soda in the scheduled time.

On the 2nd January, 2 rotoli per tumolo of nitrate of soda were spread, the next spreading followed on the 20th January with 3 rotoli, and the third spreading on the 12th February with 4½ rotoli; and the fourth and fifth spreading at the end of February with 5½ rotoli; the winter months were dry and lack of moisture in the soil did not allow the fertiliser to exercise fully the desired effect on the crop. The results obtained, which are tabulated below, were contradictory, but in winters with normal rainfall, the fractional distribution might prove advantageous.

Variety of Wheat	Production Plot. A.	Production Plot. B.	Production per Tumolo in Tumoli		Difference in production per Tumolo
			Plot. A.	Plot. B.	
	Mondelli	Mondelli			
Malta Yellow	5½	6½	8·5	10·—	+ 1·5
Malta Red	6½	9½	10·—	14·8	+ 4·8
Dreadnought	13	14	20·—	21·7	+ 1·7
Cappelli	8	7	12·4	10·8	+ 1·6
Virgilio	18	16	28·8	24·8	+ 3·4
Mentana	22	22	34·—	34·—	—

4. TOMATOES.

In order to encourage the cultivation of the varieties of tomatoes most suitable for the canneries, 101,750 tomato seedlings of the "Perfection" and "San Mazano" varieties were distributed: 89,900 in Malta and 11,850 in Gozo free of charge. The policy of distributing tomato seeds and seedlings from selected stock will be continued in future, and extended also to other crops, when possible. Over one fourth of the seedlings were distributed in the Qormi districts, while farmers in the Siġġiewi and Rabat districts, which are notable for the cultivation of tomatoes, planted only a very limited number of seedlings.

5. MAIZE.

Nine varieties of maize were introduced: two for fodder, two for seed and five for human consumption. Although in Malta the sweet corn is not used, it is well known abroad, particularly in the U. S. A.

The seed in the fodder varieties is no real indication of the value of the variety concerned, as in this case the main purpose is production of fodder. No records could be kept of the green forage, as before making a real test it is desirable to start the experiment from locally grown seed. However, it may be mentioned that, the plants produced from the imported seed gave good growth and may well prove to be a good substitute for the cactus stems during the summer months, provided that the crop can be irrigated.

Besides the two varieties for seed, the local variety was also cultivated. Two imported varieties compared very well with the local one, and in future it may prove advisable to cultivate the early large Yellow Flint, instead of the local variety.

The best sugar corn was "Country Gentleman", and there was a constant difference in production from one variety to another. The respective weights and measures of each record show the fallacy of selling cereals and other foodstuffs by measures. Although the production of the local seed "Early Golden Orange" was 2 tumoli per tumolo more than that of the local seed, the weight of this was 40 rotoli more than that of the former; so was also the case with "Pocohontas" and "Early Metropolitan" varieties. The results of this experiment are tabulated below:—

Variety of Maize	Quality	Area of plot in sq. ft.	No. of plants	Production in Mondelli	Weight of seed in rotoli	Production in Tumoli per Tumolo	Weight of seed per Tumolo in rotoli
Evergreen sweet corn	Fodder Corn	3510	375	16	36	$9^{1}/_{6}$	124
Sweet fodder ...	„ „	id.	id.	22	$51^{1}/_{2}$	$12^{2}/_{3}$	174
Local variety ...	Field Corn	1521	234	$10^{1}/_{2}$	30	14	239
Early golden Orange ...	„ „	3510	468	21	79	12	273
Early large yellow flint	„ „	id.	id.	37	119	21	410
Golden Bantam ...	Sugar Corn	1521	234	11	33	$14^{2}/_{3}$	262
Stowell's Evergreen ...	„ „	id.	id.	16	$35^{1}/_{2}$	$21^{1}/_{6}$	282
Country Gentleman ...	„ „	id.	id.	17	41	$22^{2}/_{3}$	326
Early Metropolitan ...	„ „	id.	id.	$13^{1}/_{2}$	36	18	286
Pocohontas	„ „	id.	id.	13	$38^{1}/_{2}$	$17^{1}/_{6}$	306

Another trial was made with three of the above mentioned varieties of corn, to test the possibility of growing the crop with the aid of mulch paper, the paper being used to cover the soil and prevent loss of moisture through evaporation. As the soil was exceptionally dry on account of absence of rain in the spring, this experiment did not give any appreciable result.

A third experiment to cultivate maize dry farmed without the use of mulch paper, for the same reasons was also a failure.

6. CONTROL OF MOLE CRICKET.

An experiment was carried out to test the different methods of checking the mole cricket (Grillotalpa Grillotalpa). The effects of this pest are well kown to our farmers, who cultivate crops on irrigated land. The only means of combating it adopted by them is the replacement of irrigated crops by dry farmed crops for one year, wheat being the crop usually cultivated. The mole cricket will not thrive on comparatively dry land, so that it will move to land with more moisture content. The method of keeping the land dry farmed for one year is objectionable as it results in a substantial loss to the farmer; also the damage caused by this insect, though reduced by this method, is not eliminated.

The results of the experiments mare are somewha tcontradictory, for instance, it would appear that in the control plot the percentage of seedlings cut was less than in the five plots differently treated for the protection against mole cricket, the widest divergence being noticed in plot 3 where 45% of the seedlings were cut. These disparaging results are due to irrigated land being unequally infested with mole cricket. The mole cricket problem is very important and further investigations will be carried out.

Experiment to check mole cricket damage on a tomato crop.

No.	Kind of protection for seedlings	No. of seedlings transplanted	No. of seedlings cut by mole chicket	% of seedlings cut.
1	Naphthalene: 55 rotoli per Tumolo ...	249	48	19 %
2	Naphthalene: 27½ rotoli per Tumolo ...	249	42	17 %
3	Cane: 6" long	158	71	45 %
4	Cane: 4" long	141	37	25 %
5	Seedlings planted on ridges...	170	35	21 %
6	Carbon Bisulphide 40 stokes per square canna... ...	162	26	16 %
7	Zinc pipes: 4" long... ...	50	3	6 %
8	Zinc pipes; 6" long... ...	50	5	10 %
9	Fosfarina	100	11	11 %
10	Heaps of dung	107	27	22 %
11	Control plot...	173	29	17 %

7. PIG BREEDING.

The number of pigs kept at the Government Experimental Farm varies from time to time according to, (a) the needs of boar keepers who make requests to purchase service boars, (b) to the number of pigs kept for fattening, and (c) to the number of gilts on hand which are sold when available to supply pig breeders with pure breeds. At present the following are being kept at the Farm :—

	Large White	Middle White	Wessex Saddleback	Berkshire	Total
Boars	1	2	1	3	7
Sows	3	3	—	2	8
Young Boars ...	8	2	2	3	15
Gilts	8	—	5	4	17
Sucklings	6	23	—	8	37
Fatteners	12	3	3	1	19
					103

In addition 13 service boars in Malta and 10 service boars in Gozo are kept on loan by farmers. In Malta the total number of services performed by the Government boars (in eleven months) was 554 against 352 last year. In almost all districts in Malta was a notable increase in the number of services, Musta leading with 71 services, with an increase of 39, Rabat with an increase of 47, Mġarr with 48; small decreases were noticed chiefly in Żebbuġ and Żeitun. There was a decided preference for the Large White and Middle White boars, as there were 506 services from white boars against 48 services of Wessex Saddleback and Berkshire boars. The main reason for this preference is that the red spots on the skin (commonly signs of erysipelas) are much more readily noticeable on white pigs. As the market has been getting better, there has been more inducement for breeding and therefore for more services. The following Table shows the distribution of services in Malta :—

Services performed in Malta by Government Stud Boars from November, 1st 1935 to 30th September, 1936.

No. and breed of boar.	Locality where the Boar is kept.	Gut. Fge. Fam.	Attard	Aviaq	Birkirkara	Birżebbuġa	Dingli	Gharghur	Hamrun	Kirkop	Lija	Luqa	Marsaskala	Mgarr	Mosta	Mqabba	Mellieħa	Naxxar	Qrendi	Qormi	Rabat	St. Paul's Bay	St. Julian's	Siġġiewi	Tarxien	Żebbuġ	Żejtun	Żurrieq	Total	Remarks
No. 87 Large White	Birżebbuġa ...	..	...	...	...	11	...	...	...	...	...	..	...	..	..	..	..	...	...	...	..	...	...	...	...	...	4	...	15	Consigned 5.1.36 Withdrawn 21.9.36
„ 89 „	Gharghur ...	...	..	...	..	...	...	13	...	...	..	...	...	...	..	...	...	3	...	..	...	...	...	...	...	...	...	...	16	Consigned 5.1.36 Withdrawn 30.9.36
„ 61 „	Lija ...	...	1	...	...	...	...	...	...	...	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17	Consigned 3.3.36 Withdrawn 27.9.36
„ 92 „	Mosta ...	...	2	...	...	...	...	2	...	...	1	..	...	...	52	...	...	25	...	...	1	...	...	...	...	...	...	...	83	Consigned 5.1.36
„ 63 „	Mosta ...	...	...	...	...	...	..	3	...	...	1	...	...	..	14	...	...	12	...	...	...	...	...	...	...	...	...	...	30	Consigned 30.9.33
„ 107 „	Mgarr ...	...	...	...	...	...	..	...	...	...	...	...	...	3	...	...	..	...	...	...	22	...	...	...	...	...	...	...	25	Consigned 4.6.36
„ 93 „	Mgarr ...	...	...	...	...	...	...	...	...	...	...	...	...	45	...	...	...	...	...	..	...	...	...	...	...	...	...	...	45	Consigned 5.1.36 Witndrawn 29.6.36
„ 85 „	Qormi ...	5	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	9	1	...	...	...	...	...	...	...	15	Consigned 5.1.36
„ 94 „	Żejtun ...	..	...	...	...	...	6	..	...	..	...	..	...	..	...	..	..	...	..	..	24	...	...	3	...	7	...	1	41	Consigned 25.6.36
„ 84 „	St. Julians ...	...	..	..	6	..	..	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	...	...	...	...	...	25	Consigned 5.1.36
„ 86 „	Siġġiewi ...	1	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26	...	...	...	...	27	Consigned 5.1.36
„ 88 „	Tarxien ...	...	...	...	...	...	...	...	...	...	...	..	...	..	...	...	...	...	...	...	...	...	...	...	31	...	...	...	31	Consigned 5.1.36
„ 62 „	Żurrieq ...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	22	25	Consigned 26.3.36
No. 98 Middle White	Marsaskala ...	...	...	...	...	...	...	...	...	...	...	...	13	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	17	Consigned 5.1.36
„ 66 „	St. Paul's Bay ...	..	..	...	...	...	...	...	..	..	..	..	..	..	...	...	7	...	...	...	...	34	...	...	...	...	...	...	41	Consigned 4.6.36
„ 46 „	St. Paul's Bay	2	...	..	...	...	...	...	...	...	...	...	..	..	5	..	...	1	...	...	...	26	...	...	...	...	...	...	34	Consigned 26.2.35 Withdrawn 5.7.35
„ 95 „	Qormi ...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19	...	...	..	...	...	...	...	...	25	Consigned 5.1.36
„ 77 „	Qormi ...	...	...	...	...	..	...	...	1	...	...	1	...	...	...	...	...	...	...	12	...	...	...	..	...	...	...	...	14	Consigned 24.7.36 Withdrawn 30.9.36
No. 101 Wessex Saddleback	Kirkop ...	...	...	...	...	...	...	...	...	11	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	13	Consigned 5.1.36
No. 2 Berkshire ...	Rabat ...	2	..	...	...	...	..	..	..	..	...	...	...	...	...	...	...	...	...	...	13	...	...	...	..	...	...	...	15	Consigned 1.10.36 Withdrawn 27.10.36
		16	3	2	6	11	6	25	1	11	18	1	13	48	71	1	7	41	2	40	61	60	12	29	31	7	8	23	554	

In Gozo, contrary to what happened in Malta, pig breeding suffered a severe setback and only 288 services, against 451 last year, were performed. This is a reflection of the pig crisis which in Gozo was much more felt, owing to the fact that in Gozo pigs invariably fetch a smaller price than in Malta and also to the bad habit of Gozitan farmers who in similar circumstances, hoping for a better market, always keep their pigs for a considerable time even when their weight nears two qantars. Under the circumstances it is not to be wondered at that at a time pigs fetched only £2 per qantar. In consequence, farmers either had to rear pigs at a loss or else to sell sows to be slaughtered, and this accounts for the reduction of services. Although in almost all districts the number of service remained constant or fluctuated only slightly, in Nadur the number was reduced to 49 as against 160 last year. Were it not for the wholesale destruction of sows the number of services would have been much greater. Last year black boars were preferred to white boars, but this year preference was given to the white boars and the services from these, taking into consideration the number of service boars kept on loan by farmers, accounted for 63% of the services performed. These preferences of farmers must be followed closely by this Branch, in order that the type needed can be supplied. The following were the services in Gozo :—

Services performed in Gozo by Govt. Boars from 31st August, 1935 to 30th August, 1936.

No. and breed of Boar.	Locality where Boar is kept	Ghajnsielem	Gharb	Kaċċa	Kerċem	Nadur	Qala	Sannat	Viktoria	Xewkija	Żebbuġ	Total	Remarks
No. Large White	Gharb ...	...	11	...	...	...	...	...	3	...	...	14	
„ 12 „	Kaċċa ...	...	...	53	...	...	...	...	6	...	...	59	
„ 123 „	Kaċċa ...	...	...	22	...	...	...	...	...	...	...	22	Consigned 3.7.36
„ 56 „	Nadur ...	...	...	...	...	21	2	...	...	...	...	23	Withdrawn 8.6.36
„ 118 „	Nadur ...	...	...	...	...	10	1	...	...	...	...	11	Consigned 15.7.36
No. 67 Middle White	Kerċem ...	...	...	...	5	...	...	...	2	...	1	8	Consigned 8.6.36
„ 68 „	Nadur ...	4	...	1	...	16	...	...	...	...	...	21	Consigned 8.6.36
„ 1282 „	Xewkija ...	4	...	...	...	...	...	6	2	35	...	47	Consigned 7.1.36
No. 102 Wessex Saddlebeck	Qala ...	...	...	...	...	...	4	...	...	...	...	4	Slaughtered 29.5.36
„ 52 „	Qala ...	...	...	...	...	...	7	...	...	...	...	7	Consigned 8.6.36
„ 15 „	Viktoria ...	4	2	1	...	2	...	5	12	10	1	37	
No. 3 Berkshire ...	Kaċċa ...	...	...	16	...	...	...	...	...	...	...	16	Withdrawn 8.6.26
„ 4015 „	Viktoria ...	...	...	...	...	...	...	3	16	...	...	19	Consigned 7.1.36
		12	13	93	5	49	14	14	41	45	2	288	

As a further step to lessen the mortality of pigs, a competition amongst pig breeders was held. Accordingly, Malta and Gozo were divided into eight districts, and prizes were assigned to every district, to be awarded to the pig breeders who best complied with the rules as explained in leaflets distributed in all country districts. Unfortunately, farmers do not fully realise the importance of good housing and the results of this competition were rather disappointing.

8. POULTRY REARING.

The number of birds bred this year, not including all other birds not true to type, amounted to :—

Black Mongrels	402
White Leghorns	238
Rhode Island Reds	221
Buff Plymouth Rocks	163

The discarded cockerels and pullets, sold on condition that they should be slaughtered under the direct supervision of an official of this Branch, amounted to 570 of which 354 were Black Mongrels, 72 White Leghorns, 76 Rhode Island Reds, and 66 Buff Plymouth Rocks.

To introduce new blood in the breeders' stock, cockerels of a very good strain of the different breeds, will be imported from England and mated with selected hens bred at the Farm.

This year the mortality among chickens was less than that of the preceding year, this being primarily due to the acclimatisation of the stock hatched and bred at the Farm. The mortality of chicks among the different imported breeds was more or less equal, but in the growing stock the hardiest proved to be Buff Plymouh Rocks, next the Rhode Island Reds and last the White Leghorns. As regards laying the Rhode Island Reds were far superior to the other breeds.

The following selected cockerels were sold by auction, on the 15th December, 1935, in Malta, and on the 6th January, 1936, in Gozo :—

	Malta	Gozo	Total
Black Mongrels	15	21	36
White Leghorns	21	26	47
Rhode Island Reds	28	37	65
Buff Plymouth Rocks	4	1	5

13,219 hactchings eggs were also sold to farmers and fanciers at slightly above market price. During the hatching season the demand exceeded the supply and at times only bonfide farmers could be supplied. To avoid troubling the farmers to come in the Farm to buy a sitting of eggs, eggs were taken and sold in the most distant villages in turn, farmers being previously notified by the Parish Priest regarding the place, date and time of sale. However, many chickens of the imported breeds hatched by the farmers died; this mortality was expected, as farmers are not equipped to hatch and rear chickens from selected stock. As a matter of fact farmers were warned against the danger of heavy losses when breeding from imported stock, if proper care was not exercised; when possible only eggs from the local mongrels were supplied. The best results, considering the method of keeping poultry in the Farm, were obtained by mating a selected cock from the imported breeds with the local mongrels; mortality when compared with that of a pure breed was thereby reduced and average egg production increased. As the method of distributing selected cockerels proved very satisfactory, in future the number distributed will be greatly increased.

It is also gratifying to note that, through our insistent propaganda, there is a fair demand for concentrated foodstuffs. This Branch stopped the selling at cost price of such foodstuffs as soon as it became known that a local firm was importing them. The price charged, in view of our warning, was kept moderate, notwithstanding that no other firm sold concentrates.

As already stated the mortality of chickens from imported breeds was very great, but in the adult vaccinated stock, the losses were less than in the previous year. This

is chiefly due to the free vaccination of birds carried out by the Government. The work done by the Government Vaccinator is tabulated below :—

Return showing the number of Fowls vaccinated from 1st November, 1935— up to 30th September, 1936.

Location	No. of fowls vaccinated for			Location	No. of fowls vaccinated for		
	Fowl Pox	Fowl Cholera	Total		Fowl Pox	Fowl Cholera	Total
Malta.							
Attard	90	—	90	Pietà...	83	52	132
Għaxiaq	95	104	199	Siġġiewi	822	344	1,166
Birkirkara	322	193	515	Sliema	456	56	512
Balzan	174	—	174	St. Julians	441	93	534
Birżebbuġa	215	—	215	Tarxien	187	—	187
Kalkara	50	—	50	Valletta	89	—	89
Kirkop...	512	—	512	Żabbar	131	—	131
Qrendi	179	120	299	Żebbuġ	16	—	16
Floriana	—	27	27	Żurrieq	-	62	62
Qormi	40	31	71				
Gudja	32	-	32	Gozo.			
Hamrun	585	28	613	Għarb	539	79	618
Luqa	50	—	50	Kaċċa	—	24	24
Marsa	10	191	201	Kerċem	555	77	632
Marsaxlokk	48	—	48	Nadur	45	—	45
Mellieħa	243	—	243	Viktoria	360	48	408
Mqabba	282	—	282	Xagħra	216	89	305
Msida	40	56	96	Xewkija	86	71	157
Naxxar ...	47	58	105				
Mdina	53	—	53				
Pawla	110	—	110	Total ...	7,203	1,803	9,006

To induce farmers to improve housing and hygiene of poultry pens, a competition with handsome prizes was widely announced. The rules and instructions were printed on leaflets and distributed in all districts. However, as no improvement resulted, and for other reasons, farmers were given another chance the time limit being extended to March, 1937.

To meet the ever increasing demand for reliable hatching eggs, the construction of other stone pens will be started within a few weeks. Also, as stone pens represent a permanent construction, and as farmers and amateurs, living in a rental farm or house, will be debarred from building such pens, a trial will be made with collapsible (removable) wooden houses, which, if successful, will meet the requirements of these breeders. A few wooden houses have been imported from England, to be used as breeding pens, laying pens and for growing stock. The suitability of such pens will be carefully watched, as at first sight it may appear that they will be liable to harbour mites, which will not be so easy to control as in the case of stone built pens. If such pens prove satisfactory, other similar pens will be constructed locally.

9. DONKEYS.

The donkeys kept at the Stud Station consist of two jacks, two young jacks and three jennies. As already remarked in previous reports, mule breeding is not much practised on account of the development of mechanical transport. The number of jennies and mares served was three, the donkeys were however, utilised for light work on the Farm.

10. CATTLE.

The cows kept consist of two Swiss cows, a Maltese cow, a Maltese heifer, and a heifer calf resulting from a cross between the Swiss bull and the Maltese cow. A Swiss bull and a Swiss bull calf are also kept at the Farm. Eight other Swiss bulls are kept on loan by farmers in Malta and Gozo. The number of cows will be increased by another twenty as soon as the cowshed and dairy are completed. The services performed by each bull were as follows :—

Services performed in Malta by Government Stud Bulls from 1st September, 1935 to 31st August, 1936.

No.	Breed and Bull Number	Locality	Expe. Farm	Axiaq	Qormi	Tarxien	St. Julian's	Luqa	Żurrieq	Naxxar	Żejtun	Kirkop	Żabbar	Lija	Birkirkara	Attard	Mellieħa	Sliema	Rabat	Dingli	Għargħur	Mġarr	Siġġiewi	Ħal Żan	St Paul's Bay	Msida	Hamrun	Mosta	Attard	Total
1	B. S. 7935 ...	St. Julian's ...	...	...	...	...	13	...	...	2	...	...	...	...	2	...	...	6	..	...	2	...	...	5	...	2	1	2	2	37
2	B. S. 2097 ...	Tarxien ...	...	...	1	10	...	1	1	...	5	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21
3	B. S. 7706 ...	Rabat ...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	4	...	124	6	...	1	1	...	1	...	...	3	2	145
4	B. S. 788 ...	Marsa ...	7	1	3	...	...	2	...	...	...	...	1	...	...	...	3	...	...	...	...	...	4	...	...	...	...	...	...	21

Services performed in Gozo by Government Stud Bulls from 1st September, 1935 to 31s August, 1936.

No.	Breed and Bull Number	Locality	Viktoria	Kaċċa	Nadur	Xewkija	Qala	Għajnsielem	Għarb	Kerċem	Sannat	Żebbuġ	Għasri	Total
1	B. S. 2365 ...	Kaċċa ...	6	68	...	...	...	2	...	...	1	2	...	79
2	B. S. 589 ...	Ta Hamet ...	17	...	...	2	...	...	8	15	2	15	5	64
3	B. S. 884 ...	Għarb ...	...	...	...	...	...	...	26	...	...	2	3	31
4	B. S. 1903 ...	Kaċċa ...	27	...	1	...	...	...	...	...	...	...	...	28
5	B. S. 7975 ...	Nadur ...	...	...	8	...	7	1	...	...	...	...	...	16

Three bulls for Gozo and two bulls for Malta arrived in Malta in late November and this explains the reduced number of services performed by each of them. But even for the same period the number of services by the different bulls may vary greatly, because of the varying number of cows in different districts and of the varying popularity of various bulls and bull keepers amongst farmers.

It is premature to discuss at length crosses with the local breeds, but, as regards the calf stage, a great improvement has been observed in the weight at birth as compared with calves of local breeds, and also the rate of growth of cross-breds is very satisfactory. The crosses with the Swiss bulls are popular and all those which have been seen at the different farms show a great improvement over the local breeds.

15th October, 1936.

(Sd.) A. Azzopardi,
Director of Experimental Farm
and Agricultural Organiser.

APPENDIX II.

Report on Viticulture for the year 1935-36.

Introduction. The agricultural year 1935-336, the main feature of which was the exceptionally dry rainy season, closed very unfavourably as far as the viticulturist was concerned.

The vines which had been weakened by the extraordinarily heavy crop in the previous year, could not recover satisfactorily owing to the drought and in consequence both the growth and the yield in 1935-36 were very poor. It is estimated that the yield per acre of the grape crop in 1936 was about 60% of the average crop and only about half that obtained in 1935.

Luckily neither *Peronospora* nor *Oidium* caused much damage, since the spread of these diseases was checked by the dry weather, and the growers, who are now convinced of the necessity of treatment, in general willingly carried out spraying with *Bordeaux mixture* and dusting with sulphur. The ravages of *Phylloxera*, however, in the small number of vineyards still remaining which are planted with vines not grafted on American stock, are such as to persuade even the most recalcitrant growers of the necessity for reconstituting their vineyards.

As regards the different varieties of American graft bearers introduced into these Islands, it may be noted that to date no particular weakness has been shown due to the dryness of the soil despite the exceptional drought of 1936 and on this account therefore the varieties should prove satisfactory.

Vintage. The weather during the vintage was favourable. As already stated, the crop was very poor in quantity but the quality, however, for an exceptionally bad year, may be termed good, even if for some varieties the ripening was slow and imperfect.

After a certain period of uncertainty, due to lack of organization on the part of the growers, the crop was sold for a fair price.

Reconstitution of Vineyards. Notwithstanding the uncertain grape market, the reconstitution of Phylloxerated vineyards has proceeded slowly and surely. No less than 350 tummoli of land have been planted as vineyards during the last planting season.

The propaganda work undertaken by this Department, the technical assistance afforded by the same, the complete overhaul of the Government American vine nurseries, as well as the control of private nurseries in terms of the Regulations published by Government Notice No. 157 of 1935, together with the establishment of experimental vineyards, have produced a beneficial effect on the laying out of vineyards and on viticultural practices. We are, however, still far from reaching perfection which can only be attained in the course of time.

The fundamental reason for the slow viticultural progress is the fact that the production of wine which is practically the only outlet for the grape crop, remains still unprotected and uncontrolled. In consequence, in Gozo, where the wine production exceeds local requirements, many difficulties are experienced in disposing of the surplus in Malta, where there is an abundant production of artificial wine and a large consumption of imported wine, both of which depress the market for local natural wine.

Government American Vine Nurseries. The production of the Government American Vine Nurseries was as follows:—

Nurseries.	American Rootlings.	Graftlings.	Fruit Plants.
Malta	50,223	4,291	—
Gozo	100,177	50	118
Total ...	150,400	4,341	118

this production being disposed of as shown in the following table :—

Destination.	American Rootlings.	Graftlings.	Fruit tree Stock.
Sold in Malta	42,615	2,254	—
Sold in Gozo	104,060	50	45
Planted in Exp. Vineyards ...	1,040	—	—
Planted in Nurseries (mother plants	163	90	—
Used in ampelographic collection at Buskett	1,615	335	—
Given to Public Gardens ...	—	—	73
Replanted in Nurseries	200	850	—
Distributed freely for demonstration purposes	400	38	—
Destroyed as weak stock ...	247	724	—
Total	150,400	4,341	118

The income from the nurseries was as follows :—

Stock sold.	In Malta.	In Gozo.	Total Income.
Rootlings and graftlings ...	£67. 8. 2	£129. 9. 2	£197. 7. 4
Fruit tree rootlings	—	2. 16. 6	2. 16. 6
Grapes (17.17 qantar)	—	9. 6. 7	9. 6. 7
Other Fruit and Potatoes ...	—	7. 5. 11	7. 5. 11
Wheat straw	—	12. 0	12. 0
Tomatoes	—	12. 0	12. 0
Melons	—	13. 0	13. 0
Olives	—	11. 4	11. 4
Total	£67. 8. 2	£151. 16. 6	£219. 4. 8

It appears from the above tables that the yield of nursery stock in 1935 was somewhat below that in the previous year. This was due to the fact that many cuttings and graftlings did not take owing to the excessive humidity of the soil during the planting season (Spring, 1935) and to the lack of rotation of the land used for nurseries.

However, the stock which was distributed proved to be very strong and in all cases transplanted very satisfactorily.

Planting nursery stock in 1936. New plantations in 1936 were mostly laid out on new land with a view to bringing the old nurseries under rotation of other crops. The stock planted in the Spring, was as follows :—

Nurseries.	Stock Cuttings.	Graftlings.	Rootlings. American.	Grafted
Malta	290,000	5,700	850	200
Gozo	120,000	—	80	—
Total ...	410,000	5,700	930	200

The necessity of irrigating the above stock, even from time of planting, owing to the drought, inevitably resulted in a weak initial vegetation, whilst the subsequent growth was also stunted. It is considered, however, that it will be possible to satisfy the requirements of growers during the next vine planting season. Such requirements are increasing from year to year.

American mother plants. The drought also produced bad effects on the vegetation of the mother plants. The worst affected were the older ones, and especially those which were originally planted with incorrect methods.

A plot of Berlandieri X Rip. 420 at Victoria Nursery, Gozo, showed considerable weakness from the start of vegetation. The plants revealed an appearance of altered ampelographic characters similar in some respects to those produced by Roncet and cryptogamic affections. From observations made it was concluded that the weakening, with attendant somatic alterations, was due entirely to premature ageing of the plants owing to insufficient preparation of the soil before planting, the drought making this more evident. The plants in the entire plot were uprooted.

In addition, in the Victoria Nursery and also at Kerċem Nursery, Gozo, and at Ta' Sammat Nursery, Malta, several plants of the Rupestris du Lot variety, which presented the characters of "Roncet", had to be eliminated. Attention should be drawn to the fact that the mother plants at the Ta' Sammat Nursery in Casal Pawla, which though still young and planted in a soil which should be ideal for that variety, and after a correct preparation of the land, ought not to have been easily affected. That the disease occurred in this nursery is a confirmation of the extraordinary susceptibility of the Rupestris du Lot to Roncet which was feared from the first.

On the whole no appreciable damage has been suffered by the mother plants recently planted (Spring, 1935). This fact, especially as regards the newly imported varieties, gives us grounds for hoping that they will prove suitable to this dry climate.

The number of American mother plants at present existing in the Government nurseries is as follows:—

4217	Rupestris du Lot
3278	Berl. Rip. 420A
850	,, ,, 34EM.
583	 157-11
586	,, ,, Teleki 5 ft. Kober.
100	,, ,, Teleki 8 B.
990	,, ,, Teleki — Ferrari 8 B.
260	,, ,, Teleki 8 M.
280	,, ,, Teleki M.
350	Berl. Rup. 1103 I. P.
50	Rip. Solonis 11-16
1677	Class. Berl. 41B.
13.221	Total of American mother-plants.

Extraordinary works and cultivations in the nurseries. The empty plots were planted with potatoes, wheat and tomatoes. By making use of the crop rotation initiated last year in the rootling nurseries, the Victoria Nursery, Gozo, was rearranged during the summer by means of drainage works.

AMPELOGRAPHIC COLLECTIONS.

Ampelographic Collection of Villa Rundle, Victoria, Gozo.

The old ampelographic collection at Villia Rundle in Victoria Gozo, has been reduced to a very bad state owing to the unfavourable weather conditions prevailing during the past year. The grape yield amounted to only 8.07 qantars which was sold at 10/- per kantar (£4. 0. 9).

In this ampelographic collection special mention should be made of some overgrafts with varieties of wine grapes imported from Italy in 1935, namely Trebbiano, Barbera, Merlot, and Cabernet Franc, on account of their luxuriant growth and abundant yield.

New Ampelographic Collection at Buskett. With the object of starting a regular study of the varieties of grapes cultivated in these Islands as well as of numerous other "selected" varieties which are popular abroad, it was considered necessary to begin a new ampelographic collection at Buskett. For this purpose a plot of 4 tumnoli of land was chosen, prepared and then planted with American rootlings which are progressing satisfactorily.

EXPERIMENTAL VINEYARDS.

In all the experimental vineyards, but particularly in those in Malta, growth was late in starting owing to the shortage of moisture in the soil and to the high winds charged with sea-spray which damaged the tender shoots.

As the dry weather persisted, growth continued to be moderate for all the varieties of American vines cultivated. In lighter and shallower soils many mother plants were observed towards the end of Spring to be apparently affected with chlorosis, which was attributed to inadequate moisture in the soil. The drought was particularly felt by the Teleki hybrids recently imported from upper Italy where there is a moist climate, and naturally they are not yet acclimatised. Later on in the season the foliage recovered its normal green colour.

The varieties which have shown exceptional vigour in all soils have been the Teleki hybrids and Berl. X Rip. 1103 I. P.

Next Spring (1937) all the Experimental Vineyards will be grafted with selected imported varieties of vinifera vines.

A. DE NARDO.

APPENDIX III.

Report of the Superintendent of Public Gardens for the year 1935-36.

The year 1936 was, horticulturally, a period of great anxiety, since owing to the rainfall shortage the water supply had to be suspended in some gardens and diminished in others. Special arrangements were, however, made to protect the plants, and to cope with the diminished water supply, and as a result comparatively few plants were lost.

SAN ANTONIO PUBLIC GARDENS.

Weather.

2. As specially affecting gardens, the main features of the year were the low raifall, high winds, mild winter and the comparatively low average temperature in spring. The total rainfall registered in these gardens was 14.56 inches, which is very much below the average. Rain fell on 47 days and was distributed as follows:

1935			1936		
September	...	.47 inches	January	...	1.76 inches
October	...	1.77 ,,	February	...	.83 ,,
November	...	3.85 ,,	March	...	.08 ,,
December	...	3.70 ,,	April	...	1.29 ,,
			May	...	.81 ,,

The wettest month was November with 3.85 inches. The greatest fall during any 24 hours was 2.18 inches registered at 8 a. m. on the 13th November. A violent storm was experienced on the 3rd and 4th February, which caused great damage to trees, shrubs and spring-flowering annuals.

Improvements.

3. Several improvements have been effected during the year. Among others may be mentioned the remodelling of the terrace at the upper entrance of the gardens and its replanting with a choice collection of Zonal Pelargoniums which are in bloom all the year round; the erection of a modern lean-to glass-house with a northern aspect and all necessary ventilators and accessories to make it as cool as possible during the summer, and therefore suitable for such plants that require a mitigated temperature during the hottest months of the year — the contents of this new glass-house can be viewed with comfort since there is no central stage; and the construction of a new rosery bordering a wide path in the left wing of the gardens. This new rose garden will soon be planted with a choice collection of bush roses in twentyfour distinct varieties — twelve plants of each variety in each division set in grass. The site selected was of no importance before it was transformed into a rose garden, wing to the low ground on both sides of the path. The ground has been raised to the required height by filling the depression, 2½ feet by 140 feet on each side, with the best heavy red soil. Good drainage has been provided, and a fair amount of cow manure and wood ashes have been incorporated with the soil, thus ensuring that the preparation of the ground is exactly what roses require.

Flower Beds.

4. A number of flower beds were made, some being 5 feet in diameter, and others 8 feet long by 6 feet wide. They were deeply trenched and a fair amount of manure and an adequate dose of I.C.I. concentrated fertilizer was incorporated with the soil. They were planted with Stocks, Cinerarias, Pansies, Petunias, Gaillardia, Lurkspur, Phlox, Coreopsis, Marigold, etc. which made a pleasing mass of colour.

Flowering Bulbs.

5. The four long borders of the middle of the gardens planted with 4,000 bulbs of Darwin and Cottage Tulips in four varieties, were a great success. Owing to the mild winter they made steady growth, and all the flowers were out at the same time. Two other successful borders planted with bulbs consisted of a group of 1,000 Daffodils "King Alfred", and another group of 1,000 selected varies of *Gladiolus Childsi*, *gandavensis* and *Lamoinei*. The Giant-flowered *Ranunculus* of Florence, Accardi's Improved, strain, and *Anemone fugens*, *multipetula*, made a brave show. The following new varieties of Bearded Iris (*Iris barbata*) have been imported from California:— Alta Calefornia, Berkeley, Black Wings, Dauntless, Depute Nomblot Euphony, Frieda Mohr, Frivolite, Grace Sturtevant, Indian Chief, Meldoric, Midgard, Mme. Cecille Bourscant, Mrs. Valerie West, Rameses, Rose Mitchell, Rubeo, Sensation, Sir Michael. They arrived in a very dry condition after the long journey, but with good treatment they all recovered, and most of them flowered in the spring.

Flowering Plants under the Glaze-roofed Sheds.

6. The large collection of Zonal and Regal Pelargoniums under the glaze-roofed sheds at the north-end of the gardens has been increased by the following new varieties imported from England, all of which have flowered and proved to be a great acquisition, viz: Zonal Pelargoniums: Bridesmaid, Ceres, Clarke's Super, Dr. Crawford, J. Andrews, Jupiter, Mars, Mary Floron, Mrs. J. Temple Thomson, President Mc. Kinley, Queenswood, Sir E. Cassell, Sir T. Hamburg, Sophia Burkin, The Sirdar, Venus, Victory, Vulcan, White Queen, Clibrans' Glory, F. V. Raspail improved, Golden Glory, Queen Alexandria, Salmon Raspail, Brussels, Champion, Lieut. Col. Lambton, Lisbon, Michael, Crozy, Qui Vive, Reformator, Salmon Paul Crampel, Sensation, Winston Churchill, Alliance Franco-Russe, Double White King of Denmark. — Regal Pelargoniums: — Devonshire Lass, Exmouthian, Eucharis, Fanny Eden, Joy, Kathleen, Lady Isabel, Madame Thibant, May Queen, Mrs. Bradshaw improved, Princess Alexandria, Princess May, Princess Victoria, Queen Mary, Regalia, Sir Walter Scott, The Bride, Triomphe de St. Mande improved, Willette, Mrs. Croobs, Mrs. A. F. Wooten, Dorothy, Fascination, King George V, Lady D. Long, Rose of Devon, Queen Amelia.

Show Sheds.

7. A permanent display of flowering plants with a background of palms and other foliage plants was maintained throughout the year in the range of show sheds at the southern-end of the gardens. Plants of special merit were the collections of Azaleas, Camelias, Standard Hydrangea in white, pink and blue varities, Begonia pendula, Rhododendrons, Mimosas, Funkia grandiflora, Imanthophyllum (Clivia) minatum, Brugmansia sanguinea.

[illegible].

8. Two plants of the new orange-coloured Bougainvillea "Mrs. Louis Wathen", said to be a sport from the charming well known variety "Mrs. Butt", have been imported by the Superintendent from Calcutta, India, and presented to the gardens. The following description of this new Bougainvillea appeared in the Gardeners' Chronicle, the leading horticultural journal: "This sport possesses all the good points of Mrs. Butt, namely: that it is propagated easily by means of cuttings, is a quick and vigorous grower, flowers freely in four inch pots on the nursery benches, is presumably hardy to light frost (as it is almost identical in all qualities with Mrs. Butt), and it surpases the latter, beyond all description, in the exquisite colour of its floral bracts, which are a rich orange-terra-cotta suffused with rosy-mauve when the flowers expand. The delicate tints have besides, a sparkling transparency which is absent from the other members of its class, and altogether, it may be stated without exaggeration that this new variety is not only exceedingly floriferous, but its colour is such a lovely shade that it has perhaps few equals in the entire flora of the world". Both plants flowered late in Spring, and at the time this report was written they

were still in bloom, and the colour of the bracts has proved true to the above description. Other Bougainvilleas introduced during the year were: Bougainvillea praetorius, *B. Orange King, B. formosa, B. Maud Chattleburgh, B. speciosa, B. gracilis (refulgens), B. aurantiaca, B. fastuosa, B. elegantissima, B. braziliensis.* By these additions the collection of Bougainvillea in these gardens now contains 22 distinct varieties.

Acquatic Plants.

9. The new varieties of Nympheas imported two years ago, have not done well, owing to the fact that the water available in these gardens is brackish, and therefore detrimental to the plants.

Plants under glass.

10. The large glass-house has been kept gay with flowering plants, tender palms, ferns and other foliage plants. Noteworthy were the collections of *Primula sinensis, Primula obconica, Calceolaria hybrida grandiflora, Streptocarpus hyb., Begonia semperflorens, B. gracilis, B. tuberosa,* and *Gloxinia hybrida.* The following varieties of ferns imported from England have been added to the collection: *Pteris albo-lincata, P. tremula, P. Winsetii, Cebotium Schiedei, Asplenium bulbiferum, Neottopteris, (Asplenium) Nidus, Nephrolepis Woodii, Osmunda Hillii, Davallia Spelancae, Polypodium Mandaianum.* Other interesting plants also introduced this year are *Anthuriu, hyb. Andreanum, A. Scherzerianum grandiflorum, Beloperone guttata, Ananassa* "The Queen", *Acalypha hispida, Dieffembachia Bausei.* A small collection of Intermediate and Cool House Orchids supplied by Messrs. Charlesworth Ltd., Orchid Specialists, Haywards Heath, Sussex, has been housed in the small glass-house facing south, for the winter and moved to the new cool glass-house for the summer. The plants are small but well established. The following have flowered: *Cattleya citrina, C. labiata, Coelogine cristata, Cymbidium Pauwelsii, Cypripedium insigne, Miltonia hyb., Charlesworthii, M. hyb. Greta, M. hyb. Princess May, M. hyb. Vida* and *Oncidium Papilio* with its extremely fascinating butter-like flower, and with which as one bloon decays the spike extends and others follow in succession for several weeks The newly constructed cool-house has been found very useful during the summer for these Orchids, but with the sun heat it is impossible to keep the temperature so low as required. However much has been done to keep the plants as cool as possible by lowering the blinds early, ventilating freely day and night, damping frequently the floor and the staging, and standing the pots on a layer of coke breeze which has the effect of producing those moist, congenial surroundings which orchids so much enjoy. Notwithstanding all this attention, the plants are feeling the effect of the hard, brackish water which they do not tolerate, but which has to be used, since no rain water is available in these gardens.

Lawns.

11. Extensive improvements have been made to the lawns, which have been much appreciated by the public.

Labelling.

12. About 300 new labels have been added this year and many defaced labels have been renewed. There are now in these gardens 350 labels with raised letters on hard rolled zinc, 500 serpent labels with imprinted letters and 1,500 celluloid, zinc and wooden labels with names written on with a garden pencil.

Trees and Shrubs Added.

13. 26 orange trees, 12 ornamental trees, 125 shrubs, 131 roses and 40 creepers have been added to the gardens during the year. The following species of Ficus are being acclimated, and will be planted out in due course: *Ficus barbata, F. Dryepondtiana, F. Javanicus (diversifolia), F. Neckbudii, F. pandurata (lyrata) F. religiosa, F. utilis, F. Wedlandii.*

Insect Pest and Diseases.

14. Several of the trees, shrubs and plants have been attacked by insect pests and diseases, which, however, have been controlled by the constant use of insecticides and fungicides. In the early part of this year, hundreds of young plants of our extensive collection of Chrysanthemums, which in Autumn are the chief glory of these gardens, were badly attacked by Chrysanthemum Rust (Puccinea hierararcii) and by leaf-spot (Septoria chrysanthemi), but they were immediately sprayed with Sulphide of Potassium and the disease was arrested. *Buxus sempervirens* has been attacked by red spider mite which was dealt with by sulphur dusting. *Myrtus communis, Corynocarpus laevigata, Viburum lucidum, V. Timus* and *Evonymus japonica* have been attacked by Thrips, dusting with nicotine powder has been found very useful. *Cassine mauricaenia* and *Nerium Oleander* were covered with the black fungus growing on the honeydew deposited by scale insects: the trees were sprayed with Volck to kill the insects and are now clean and healthy. The *Evonymus* had also mildew upon it which was successfully treated with flowers of sulphur.

Lectures and Advice.

15. 26 lectures have been given by the Inspector of Public Gardens to Assistant gardeners and Apprentices, from the 6th November 1935 to the 31st March 1936. The following were the subjects treated:

a) General introduction to the vegetable kingdom.
b) The structure on seeds and their modes of germination.
c) The formation of roots.
d) The uses of stems and branches.
e) The physiological functions of leaves and the action of light upon them.
f) The structure of flowers and the method of cultivation natural and artificial.
g) The general character of the commoner families of plants cultivated in Malta.
h) The cultivation of the Liliaceae and Palmaceae.
i) Propagation and the different ways of budding.

The Superintendent furnished information personally and by correspondence to persons seeking advice in horticulture and arboriculture.

Visitors.

16. The Attendance of the Public is on the increase, especially on Saturday and Sunday afternoons. The number of tourists who visited the gardens during the year was 99,649.

Proceeds.

17. The number of oranges, lemons etc. obtained from the public gardens was 8,600 dozen, which were sold by contract for £302. 5. 6. Other proceeds from the sale of fruits, plants, flowers, flower seeds and firewood amounted to £64. 8. 6 making a total of £366. 14. 0. The total proceeds last year amounted to £242. 10. 3.

Outside Work.

18. On plans and estimates prepared by the Superintendent, the following outside work has been carried out under supervision for the Charitable Institutions Department:

a) Laying ou gardens at the Poor House, Ngieret;
b) Planting trees etc. at the Hospital for Mental Diseases.

Supply of Cut Flowers to Hospitals.

19. Since the 8th July 1936, a regular supply of cut flowers, three times a week, has been furnished to Government Hospitals from these gardens.

San Antonio and Verdala Private Gardens.

20. These gardens have been maintained in their usual attractive condition. 6 orange trees, 119 fruit trees and 24 ornamental shrubs have been added.

OTHER PUBLIC GARDENS.

Cultivation.

21. Considerable attention has been given to the Public Gardens of Valletta, Floriana, Blata l-Bajda, Gżira, Rabat and Żejtun. Plants have been re-arranged, and where necessary have been lifted and re-planted or replaced. The gardens are now laid-out in beds, which have been deeply trenched, the sub-soil taken out, and replaced with good heavy soil and manured. The beds have been planted with an extensive variety of choice annuals which made a fine display of colour during their flowering season. The beds of Godetia and Petunia at the Argotti Gardens attracted special notice.

Trees and Shrubs Added and Replaced.

22. The following table shows the number of trees and shrubs added and replaced :

Gardens	Added		Replaced	
	Trees	Shrubs	Trees	Shrubs
Argotti Public	—	50 Lantana	—	—
Maglio	—	—	2 Oleanders	—
Piazza Miratore	—	—	1 „	1 Pittosporum
Rundle	18 Oleanders	—	-	60 Lantana
Hastings	4 „	18 Daisies	—	—
St. Michael's Bastion ...	—	8 „	—	8 Daisies
Upper Barracca	—	—	1 Pine	10 Durantas
„ „	—	—	4 Oleanders	1 Hibiscus
„ „	—	—	—	4 Lantana
Lower Barracca	—	2 Duranta	2 Acacia	6 Durantas
„ „	—	40 Lantana	1 Schinus	9 Pittosporum
„ „	—	--	1 Eleagnus	3 Coprosma
„ „	—	—	1 Olive	—
Blata I-Bajda	—	—	1 Cercis	2 Washingtonia
„ „	—	—	1 Celtis	100 Myoporum
„ „	—	—	2 Laurus	—
„ „	—	—	2 Acacia	—
„ „	—	--	4 Ficus	—
„ „	—	—	1 Morus	—
Joseph Howard	1 Jacaranda	--	1 Poinsettia	18 Jistitia
Kalkara	10 Oleanders	—	—	—
Notabile Bastion	—	20 Lantana	—	—

Lawns.

23. The lawns at Kalkara Gardens were a great success. They were regularly mown, rolled and kept in good order. Flower beds with spring bulbs and annuals made a fine show among the grass. After the reconstruction of the curbs around the lawn-beds in King Edward VII Avenue, the lawn had to be renewed. The beds were filled with good soil to the required height and manured. Roots of Bermuda grass were dibbled in, covered with soil, smoothly raked and watered. These lawns are now in splendid condition.

Oleander Avenues at Rundle Gardens.

24. Two complete avenues at Rundle Gardens have been planted with Oleanders. Their bright flowers, lasting all the summer, made a pleasant contrast with the dark foliage of the surrounding trees.

PUBLIC PLANTATIONS, MALTA.

Routine and Other Work.

25. In addition to the ordinary routine work necessary for maintaining the numerous trees along public roads and open spaces throughout the Island in good order, a larger amount of what may be termed extra work has been performed, and this extra work may to a very great extent, be regarded as permanent in character.

Irrigation.

26. The spring was very dry and in consequence it was necessary to commence watering the trees in the public plantations very much earlier than in the previous years. The new motor-driven water tank has been of great advantage during the present water crisis, and were it not for this rapid mode of transporting water from any distance, many trees would have been lost and much time wasted.

Trees and Shrubs Planted.

27. The total number of trees planted during the year was 850. Of this number 468 represent replacement of trees badly damaged or destroyed by men, goats, motor traffic or other vehicles.

New Plantations.

28. The following is a detailed list of the new plantations:

Ta' Braxja Glacis	219 pine trees;
Ta' Braxja Glacis	48 cypress;
Sa Maison Glacis	99 pine trees;
Għajn Tuffieħa	16 shumack trees.

Planting Foundation and Cost.

29. New trees are planted in good foundation, viz: a pit 4 feet in diameter, trenched 5 feet deep, and filled with good soil. The trees are securely staked and protected with wire netting or wooden guards against damage by goats. The expense ranges from 10s. to £2 per tree, according to the nature of the ground and the distance which the soil has to be carted.

Damage caused by Storm.

30. The following trees were broken by the stormy weather which prevailed on the 3rd and 4th February:—

1 Ficus tree at Valletta
5 Ficus trees at Floriana
2 Ficus trees at Pietà
2 Ficus trees at Pietà
1 Ficus tree at Lija-Mosta Road
1 Ficus tree at the Marsa
1 Ficus tree at Mdina
1 Ficus tree at Hal Għaxaq
1 Oleander tree at Hal Kirkop
1 Oleander tree at Attard
1 False Pepper tree at Valletta Main Ditch
1 False Pepper tree at Attard
1 Cypress tree at Rabat-Mosta Road
1 Acacia tree at Upper Barracca Gardens
1 Araucaria tree at Blata l-Bajda Gardens
1 Paulownia tree at San Antonio Gardens
75 other trees were overthrown and their props broken in several plantations.

PUBLIC NURSERIES, MALTA.

Propagation.

31. The best care and attention has been given to all the Public Nurseries. Thousands of trees, shrubs and plants have been raised from seeds and cuttings during the past season, and there are enough trees and shrubs prepared for planting out.

Trees and Shrubs Supplied.

32. The following table shows the number of trees, shrubs etc. furnished during the year from the Public Nurseries :—

To whom supplied	Ornamental Trees	Ornamental Shrubs	Flowering and ornamental plants	Orange and other Citrus Trees	Other Fruit Trees
Public Plantations... ...	850	—	—	—	—
San Antonio Public Gardens	12	125	171	26	—
San Antonio Private Gardens	—	24	—	6	—
Buskett Public Gardens ...	—	—	—	57	—
Government Institution, Malta	73	283	80	18	—
Private Growers	56	—	72	216	44
Villa Rundle and Public Plantations, Gozo	60	4	—	—	—
Government Institutions, Gozo	—	26	—	—	19
Total ...	1051	462	323	323	63

Sales.

33. The amount collected from the sale of trees, firewood etc. from the Public Nurseries and Plantations was £131. 19. 5 as against £68. 8. 2½ last year.

VILLA RUNDLE AND PUBLIC PLANTATION, GOZO.

Villa Rundle.

Cultivation.

34. These gardens have been kept in good order throughout the year. Beds and borders were planted with spring flowering annuals which made a fine display during their flowering season.

Trees and Shrubs Added and Replaced.

35. 4 Tamarix, 3 Acacias, 1 Robinia, 4 Veronica, 18 Roses, 3 Tecoma, 2 Daisies have been added, and 1 Pittosporum, 3 Tecoma, 2 Hibiscus, 4 Daisies, 3 Bougainvilleas, 5 Roses have been replaced.

PUBLIC PLANTATIONS, GOZO.

Maintenance.

36. The trees along roads and open spaces, which have been greatly increased during the last ten years, have been regularly pruned, constantly hoed, watered and kept in good order.

Trees Added and Replaced.

37. The total number of trees planted during the year was 214, of this number 106 represent replacement of badly damaged and destroyed trees.

New Plantations.

38. The following is a detailed list of the new plantations at Gozo:

Victoria, Via Sannat	7 Oleander trees
,, ,, ...	5 Ficus trees
Nadur, Via Nadur, Ta' Xhajma	9 Pine trees
Għajnsielem, Via Mġarr	4 White mulberry trees
Marsalforn, Sda. Sta. Marija, Via Qbajjar ...	29 Tamarix trees
Marsalforn, Wied Marsalforn	12 Tamarix trees
Marsalforn, Mentqa	14 Tamarix trees
Żebbuġ, Port il-Qbajjar	15 Tamarix trees
Żebbuġ, Piazza Chiesa	12 Oleander trees
Via Caċċia-Hamet	1 Araucaria tree

Public Nurseries, Gozo.

Stock of Trees and Shrubs.

39. The Public Nurseries at "Tad-Dawwara" and Ta' Grixti, and a section at Villa Rundle used as a Nursery, have been kept well stocked with trees as far as space permitted. There are now in these Nurseries 3,848 young trees, 192 shrubs and 108 palms.

Propagation.

40. The following rootlings and seedlings of trees and shrubs have been obtained from the nurseries during the year:

Trees	690 rootlings
Shrubs	309 rootlings
Trees	206 seedlings

41. The following table shows the number of trees and shrubs furnished during the year, from the Public Nurseries, Gozo:

To whom supplied	Ornamental Trees	Ornamental Shrubs	Palms	Citrus & other Fruit Trees
Villa Rundle, Gozo	29	36	—	—
Public Plantations, Gozo... ...	214	—	—	—
Public Plantations, Malta... ...	50	—	—	—
Charitable Institutions, Gozo ...	47	63	10	4
Private Growers...	2	—	—	4
Total ...	342	99	10	8

Trees Destroyed by Stormy Weather.

42. The following is the list of trees destroyed by stormy weather experienced on the 3rd and 4th February, and on the 18th March:

1 Carob tree	on the	3rd, 4th	February,	at	Wied ta' Marsalforn
1 Tamarix ,,	,,	,,	,,	,,	Marsalforn Bay
1 Poplar ,,	,,	,,	,,	,,	Via Mgarr
1 Oleander ,,	,,	,,	,,	,,	Sannat
1 Araucaria ,,	,,	,,	,,	,,	Nadur
1 Ficus ,,	,,	,,	,,	,,	Villa Rundle, Victoria
1 Tamarix ,,	,,	18th March	,,	,,	Via Qbajjar
1 Carob ,,	,,	,,	,,	,,	Wied Marsalforn

(Signed) John Briffa,
Superintendent.

30th September, 1936.

APPENDIX IV.

Report of the Adviser in Agricultural Marketing and Controller of Agricultural Exports.

1. INTRODUCTION.

At the time of publication, in June, 1936, of the Departmental Annual Report for the agricultural year 1934-35, it was undecided whether the report for the year 1935-36 would be published at the end of 1936 or around May, 1937, together with other Departmental reports. Therefore, in view of the nature of the work of the export branch and the need for presenting up-to-date statistics, the report of the branch for the year 1934-35 also covered the work up to the middle of May, 1936, and included the report on the seed potatoes imported for the 1935-36 export season: in addition, the potato export statistics, including comparison with exports in previous years, were given up to the 18th June, 1936, after which date no further potato exports were made. As such, the scope of the present report, covering the balance of the 1935-36 season, is relatively limited.

2. GENERAL EXPORT CONTROL ADMINISTRATION.

During the 1935-36 season a total of 72 persons or firms were registered as exporters of agricultural produce, as compared with 71 in 1934-35, and 85 middlemen were licensed as brokers, as compared with 110 in 1934-35.

The standard form of note of weight for general use with produce for export, which was introduced in 1935, was again sold as books of notes in quadruplicate at cost price to public weighers. 10,890 such notes of weight were issued during 1936 as compared with 11,380 in 1935. These books of notes of weight were returned at the end of the export season and checked.

Owing to the pressure of export inspection, little checking of sales for export in the country could be carried out during the export season. However, when the potato and onion exports ceased, a random check was made throughout the country districts: 18 towns and villages and their vicinities were visited, the books of 38 weighers were inspected and 160 farmers were interviewed to ascertain particulars of their produce sales, these details being subsequently checked with the relative notes of weight. In all instances the farmers interviewed had received the correct payment: a few minor infringements of the Produce Export Ordinance and regulations were noted but these did not warrant legal action.

General correspondence has been carried on with official and trade circles abroad with reference to exports and to the provision of general trade information: in addition, circulars have frequently been issued locally with reference to trade matters.

3. POTATOES.

Detailed export statistics were given and general crop particulars were dealt with in the previous report. The salient features of the season, namely, quality and types of seed imported, growing conditions and quality of the crops (winter and spring), production, moth infestation, and distribution of the exports, are reviewed under the "Crops" section of this Departmental report and call for no further mention.

Regarding the inspection of potatoes during the 1936 season, 808 licences for export were issued, as compared with 706 licences issued in 1935. In the course of inspection, a total of 4,387 packages were refused for export, this total including 1,149 packages refused on account of potato moth infestation, as against 2,161 packages refused for export in 1935. These refusals for export involved 440 refusals of lots or parts of lots on delivery on the quay, 40 refusals being on account of moth infestation, as against 298 refusals in 1935. In the cases of refusal on account of moth infestation and, in a few instances, of mixing of varieties, the refusal for export was final: with refusals for export for other reasons, however, the produce was mostly passed for export after regrading. In one instance where moth infestation was only observed to

a slight extent in a few packages of a large lot refused, it was agreed to reinspect after a lapse of ten days and to pass then those casks not showing infection, but on reinspection almost all the casks showed heavy infestation and all were finally refused for export: this reinspection fully justified the stringent measures enforced in cases of moth infestation.

The potato moth infestation, which was brought on by the warm dry winter and spring, was quite abnormal and thus the action taken calls for special mention. Spring crop export inspection on this account was very strict, particularly with exports to the United Kingdom where moth infested potatoes are rigidly prohibited. After the end of April, approximately thirty-three per cent of the packages for export to the United Kingdom were inspected and, unless the produce from different fields could be distinguished, each cart or lorry load was treated as one lot and the presence of even only one infested potato resulted in refusal of the lot. Also, as far as possible, inspection was delayed in order to allow moth infestation, if present, to become more apparent. At the end of April the possible need for the total prohibition of exports to the United Kingdom for the balance of the season was suggested in one quarter, but, by the introduction of very rigid inspection and warning all concerned to take particular care to try to avoid packing moth infested potatoes, the export to the United Kingdom was maintained and 19,491 packages, representing about 1,420 tons, were exported, this representing a further increase in 1936 in exports to the United Kingdom, as regards both the quantity exported and the percentage of the total exports of the season. Of the quantity exported, only about 700 packages, or around 50 tons, were found on arrival at destination to be infested and refused entry, thereby necessitating transhipment or other such action. Since only around three per cent of the consignments inspected were found to show infestation on arrival, the action taken in continuing shipments under strict inspection would appear to be amply justified, since by so doing the farmers disposed of their white flesh type potatoes more remuneratively and the produce was kept on the market. The fact that infestation was much less severe in the later reaped districts also contributed towards a relatively successful continuation of the exports to the United Kingdom.

4. CUMIN SEED.

The statistics of exports of cumin seed in recent years up to the end of 1935 and a general review of the marketing situation up to May, 1936, were given in the previous report.

The total crop of cumin seed in 1936, some 5,900 cwts:, was slightly less than in 1935, but the yield per acre, whilst only about 70% of the average yield during the past ten years, showed an 18% increase owing to the late rains in April and May offsetting to some extent the effect of the winter drought. The late rains in May caused fairly general darkening of the seed but otherwise the seed was reaped in fairly good condition.

Shipments, to the end of November, 1936, have been somewhat restricted owing to the lack of demand. The local market has not been active since the prices demanded by farmers, whilst less than in 1935, have been appreciably higher than the prices ruling in other sources of production.

As regards inspection, from March, 1935, up to the date of publication of the cumin seed export regulations, on the 29th November, 1935, inspection, whilst not compulsory, was carried out in most instances: these inspections involved analysis of 80 samples from consignments or parts of consignments and 70 licences, or commercial certificates, were issued. During the year following the introduction of cumin seed export control, that is the year ending 29th November, 1936, a further 154 samples of cumin seed were analysed in connection with export inspection of 4,968 bags of seed and 95 licences for export have been issued. In connection with this inspection, 24 consignments or parts of consignments involving 773 bags have been refused for export, this seed being subsequently passed for export after resieving: 508 bags of the 773 bags refused for export were refused during the first two months after the introduction of the export regulations. Fraudulent packing of seed was detected in two

instances. In one case, involving 40 bags presented as 1935 crop seed, the bottom two-thirds of the bags were of 1934 crop and the top one-third of 1935 crop : each bag was thoroughly mixed under supervision and the whole graded as 1934 crop. In the other case only 2 bags of a consignment of 20 bags were involved, very dirty seed being covered with a layer of clean seed : the two bags in question were refused for export. In one other instance, with a consignment of 20 bags, it was obvious that the work of cleaning the seed had been inadequately supervised, the seed towards the middle and bottom of the bags containing much more foreign matter than the seed at the top of the bags : in this instance the broker concerned was warned to take more care, and 2 bags were refused, the remainder passing inspection on average sample. The re-sifting and/or regrading of seed involves the exporter or packer concerned in extra expenses and possibly losses, particularly with fraudulent packing. Fraudulent packing can do great harm to the trade in general and some extra deterrent is also necessary : the legal position has therefore been ascertained and action will be taken in all such cases in the future.

The enforcement of the export regulations has improved the cleanliness of the seed considerably, the percentage of impurity having been reduced by approximately fifty per cent during the year. During the four-months period March/June, 1935, when analyses were commenced, the weighted average percentage of foreign matter in the seed exported which was inspected was 5.6%, ranging as high as 8%, this representing an average purity of 1,252 bags. For the four months period August/November, 1936, the corresponding average percentage of foreign matter was 2.9%, all samples being under 5% according to the regulations, this representing an average purity of 1,273 bags : during this latter period only 75 bags have been refused for export on first inspection, thus illustrating the improvement in the cleaning of the seed. This is a very important feature owing to the demands from abroad that seed impurity should not at the most exceed 4% or 5%. The difference between 3% and 6% foreign matter may not seem to be great, but actually, largely owing to the relative lightness of stalks, this range of percentage means the difference between clean and dirty appearance of the seed.

After the end of the principal produce export season, the stores of the principal cumin seed dealers in the country, some 61 in number, were inspected in connection with provision of suitable storage accomodation and prevention of insect infestation.

5. ONIONS.

Of agricultural crops in general during 1936 the onion crop was probably the most satisfactory, the late rains in April and May largely compensating for the winter and early spring drought.

Apart from negligible exports at the end of May, the onion export season did not really begin until around the end of the first week of June, and, apart from a late shipment to London of some 3,000 packages in early August, the exports ceased virtually on July 11th. The exports in 1936 totalled 42,309 packages, the packages averaging rather more than 1 cwt. each : the exports during the preceding 4 years averaged 27,100 cwts. and during the preceding 10 years 47,900 cwts.

With the publication of the onion export regulations on May 20th, 1936, the onion exports were graded for size, type and quality for the first time during the past season. Despite the fairly large crop local prices were relatively good and steady throughout the season, the demand for firm sales from abroad generally exceeding the available supply. The export price during the season averaged around £4. 10. 0 per ton f.o.b. which represented a return to the farmer of about 4/- per qantar or 2/7 per cwt.

The outstanding feature of the marketing, which contributed largely to the satisfactory demand and prices, was the demand from the United Kingdom, particularly from London and Glasgow. The exports to the United Kingdom totalled 47% of the exports for the season as against a corresponding average percentage of 11% during the preceding nine years (and only 8% during the preceding three years) in

which period the annual percentage of exports to the United Kingdom was as low as 3% and never greater than 25%. The good demand in 1936, particularly from the United Kingdom, is undoubtedly largely attributable to the introduction of grading.

The exports of onions in recent years are summarised herewith in tabular form. Apart from the increase in exports to the United Kingdom during the past season, the only other noteworthy feature is the recent decrease in the export to Mediterranean countries, and since these countries are also mostly producers of early onion crops, such exports for obvious marketing reasons are not very desirable.

In connection with the introduction of grading it is of interest to record the distribution of the grades during the 1936 export season which were as follows :—

	Grade A (medium size)	22,214 packages
	Grade B (large size)	17,409 ,,
(1)	Grade A & B (large and medium sized mixed) ...	2,139 ,,
	Grade C (small size)	477 ,,
(2)	Ungraded	70 ,,
	Total Export	42,309 packages (approximately cwts.).

NOTES :— (1) Grades mixed to meet a special request from an importer.

(2) Export to Tripoli four days after publication of regulations.

As regards inspection, 167 licences for export of onions were issued and 2,820 packages were sealed to meet the requirements of importing countries. In the course of inspection 1,176 bags and 828 baskets, that is, a total of 2,004 packages, were refused for export. The principal reasons for refusal were bad size grading, freshness, and poor quality grading. Those refused for grading faults were passed for export after regrading and those which were too fresh were passed after further drying.

Exports of Onions from Malta (1927-36)

Year	United Kingdom		Holland		Belgium		Scandinavia		Miscellaneous		Total Exports	
	cwts.	£	cwts.	£	cwts.	£	cwts.	£	cwts.	£	cwts.	£
1927	11,300	2,423	17,913	3,958	2,570	625	773	240	44,735	12,537	77,291	19,783
1928	3,802	587	28,464	4,405	1,588	446	898	258	27,767	5,427	62,519	11,123
1929	2,420	435	43,661	7,513	2,939	549	384	66	33,893	7,939	83,297	15,502
1930	5,385	663	19,254	2,829	400	60	545	115	24,291	4,720	49,875	8,387
1931	7,036	1,442	15,296	3,618	1,326	400	316	82	4,876	1,242	28,910	6,784
1932	12,498	3,064	42,084	7,846	1,027	442	841	136	11,844	2,917	68,294	14,455
1933	2,510	414	13,672	1,927	3,055	132	452	88	4,148	699	23,837	2,360
1934	1,526	212	16,981	1,882	—	—	7,131	1,038	4,471	612	30,109	3,744
1935	1,130	295	1,134	326	809	265	8,478	2,825	885	154	12,436	3,863
1936	19,769	—	12,595	—	5,211	—	4,664	—	70	—	42,309	about 9,500

NOTES:— (1) 1927-35 figures extracted from Customs returns. Quantities in 1936 given as numbers of containers (baskets and bags)—the average weight per container rather exceeding 1 cwt. The average value of the 1936 crop was around £4. 10. 0 per ton f.o.b. The 1935 valuation would appear to be too high since average 1935 prices did not exceed those in 1936.

(2) The miscellaneous exports were made principally to North Africa (Tunis and Lybia) and to Italy with, in addition, fair quantities to Germany and Austria during the 1927-30 period.

6. MISCELLANEOUS COMMERCIAL CERTIFICATES.

Exports of other agricultural produce were inspected at the request of exporters. In this connection during 1936 (up to the end of November) commercial certificates were issued in respect of four consignments of shredded dried squills and two consignments of salted tomato paste, as compared with three certificates for squills and one for tomato paste in 1935. In addition, an import consignment of potatoes was surveyed and reported on at the request of the importer.

7. PHYTO-PATHOLOGICAL INSPECTION OF PRODUCE FOR EXPORT.

Since the regretted death of the Plant Pathologist, Mr. P. Borg, on the 7th May, 1936, the Controller of Agricultural Exports has, in addition, acted as Plant Pathologist for the export of agricultural produce. In this connection the principal work in 1936 was the inspection for potato moth infestation, which is dealt with elsewhere in this report, and the making of arrangements for the necessary certification of exports of onions to Scandinavia. The numbers of phyto-pathological certificates issued to meet the requirements of importing countries or consignees are tabulated below. The decrease in the number of certificates issued for cumin seed is undoubtedly due to the alternative use of the new commercial export licences (certificates).

Period	Number of certificates issued for export consignments of				Total number of certificates issued
	Potatoes	Onions	Cumin Seed	Miscellaneous Produce	
1935	147	55	49	6	257
1936 (to end November)	291	41	21	11	364

8. GENERAL MARKETING.

The marketing situation in general was reviewed up to the middle of May, 1936, in the previous report and, as regards exports, any additional features have been dealt with in this report under the headings of the respective crops.

As regards local marketing, any available time during the period under review has been devoted to continuation of the survey of wholesale and retail prices of vegetables and fruits. The first direct action which is contemplated, namely the introduction of legislation to enforce the regular presentation of accounts (including loans, etc :) by pitcali to farmers, giving power also to check the books of pitcali, and the general position in this connection, was mentioned in the previous report. Before proceeding with such action a wholesale and retail price survey extending over some period of time was advisable in order to ascertain how far the present distribution system is satisfactory and a brief summary of the results obtained may be of interest at this stage. In carrying out each individual survey the wholesale prices of the principal vegetables and fruits were ascertained from all the pitcali at Marsa, Cospicua, Birkirkara, Musta and Rabat, as far as possible all pitcali being visited on the same day. At approximately the same time, the retail prices for the same types of produce in Valletta, Cospicua, Senglea, Birkirkara, Rabat and Musta were recorded. These prices were then averaged and reduced to a common quantity unit, usually a pesa or a dozen, this involving some approximate conversions, for example, where produce is sold wholesale per bundle and retail by weight or where sold wholesale by weight and retail by number. From these average prices the percentage price increases between wholesale and retail prices were ascertained, and a table showing these percentages for the principal vegetables and fruits as obtained in the various individual surveys is given herewith.

Taking into consideration the transport charges from wholesaler to retailer, the rental and overhead retail costs, the retail profit and the difference between the average unit quantities sold by wholesale and by retail, it is considered that these percentage price increases are quite reasonable. As should be the case, the effect of season is clearly shown, the percentage price increase increasing when the supply is plentiful and decreasing when the supply is scarce : for example, if the transport costs

and retail charges, which should be relatively constant, total 1d. on a cauliflower, when the retail price is 2½d. and the supply is limited the percentage price increase is 66%, but, when the supply is plentiful, the retail price is reduced to, say, 1¾d. and the percentage price increase becomes 133%, the farmer receiving 1½d. and ¾d. respectively in the two instances, less the one-twelfth pitcali selling commission. As stated above, the transport charges and the retail costs should theoretically be approximately constant for any one type of produce irrespective of current price, and by reference to the attached table of range of wholesale and retail prices this is seen to be borne out in practice in the local marketing. These surveys could only be carried out outside the export seasons but the periods recorded cover in part the dry summer season and the rainy winter season and the seasonal variation is clearly seen. For example, with cabbages and cauliflowers the percentage is seen to range from around 40% when scarce in the summer to around 120% when plentiful in January/February, and with tomatoes, where the percentage is around 140% in the summer when plentiful, it becomes around 60% or less in the winter when scarce. The seasonal variation is also shown, though to a lesser extent, with potatoes and onions, potatoes being most scarce locally around September/October, with corresponding lowest percentages at that time of year, and onions show a higher percentage this winter than last owing to the larger crop in 1936. The relative scarcity of melons in 1936 owing to drought, with consequent increased prices, is clearly shown with the reduction in percentage price increase. Perishability is naturally another controlling factor as is shown, for example, by the relatively low percentage price increases with potatoes and onions as compared with cabbages and cauliflowers. Local fruits are only available for short seasons and thus with fruits the seasonal aspect referred to above does not operate to any great extent, but the fact that fruits are generally less perishable than green vegetables is shown by the average percentage price increase being only around 40%.

It is not feasible within the scope of this report to deal in detail with the large number of wholesale and retail prices which have been recorded during the course of the survey but a general indication of same is given in the tabular statement attached herewith, showing the range of wholesale and retail prices for some of the principal vegetables and fruits.

Approximate range of wholesale and retail prices
for some of the principal vegetables and fruits produced locally.

Kind of Produce	Unit Quantity	When supply scarce (1935-36)				When supply plentiful (1935-36)			
		Approximate Wholesale Price	Approximate Retail Price	Approximate Price Increase	Approximate % Price Increase	Approximate Wholesale Price	Approximate Retail Price	Approximate Price Increase	Approximate % Price Increase
Potatoes	1 pesa	9½d.	11¾d.	2¼d.	24 %	5d.	7½d.	2½d.	50 %
Onions	„	8¾d.	11d.	2¼d.	26 %	4¼d.	6¾d.	2½d.	59 %
Cauliflowers	„	6¾d.	9½d.	2¾d.	41 %	1¾d.	3¾d.	2d.	114 %
Cabbages...	„	5¾d.	9d.	2¼d.	39 %	1¾d.	3¾d.	2d.	114 %
Kohlrabi	each	½d.	¾d.	¼d.	50 %	1/5d.	½d.	3/10d.	150 %
Pumpkins	1 pesa	5d.	8d.	3d.	60 %	2¼d.	5½d.	3¼d.	144 %
Melons	„	7d.	9½d.	2½d.	36 %	3d.	5¾d.	2¾p.	92 %
Water melons	„	5d.	7½d.	2½d.	50 %	2¾d.	5¾d.	3d.	109 %
Tomatoes	„	5d.	8d.	3d.	60 %	2d.	4¾d.	2¾d.	138 %
Grapes	„	1s. 3d.	1s. 9d.	6d.	40 %	8d.	1/-	4d.	50 %

NOTE:— 1 pesa = 5 rotoli = 8¾ lbs.

Percentage price increases between wholesale and retail prices of the principal vegetables and fruits produced locally.

Kind of Produce	Dates when surveys carried out and corresponding average percentage wholesale-retail price increases.													
	1935							1936						
	26-30 Aug.	5-6 Sept.	25-26 Sept.	18-19 Oct.	8-9 Nov.	29-30 Nov.	20-21 Dec.	15-16 Jan.	5-7 Feb.	12-14 Aug.	1-5 Sept.	23-26 Sept.	14-17 Oct.	11-14 Nov.
Potatoes	47	50	30	29	40	46	26	50	43	20	26	17	22	42
Onions	...	26	30	40	41	33	29	26	38	47	62	59	67	107
Cauliflowers	...	...	60	26	43	78	100	162	133	52	71	36	64	108
Cabbages	...	...	20	43	39	84	83	133	150	38	95	52	40	61
Kohlrabi	...	...	59	80	100	50	75	200	200	43	50	50	80	60
Jerus. artichokes	..	...	...	42	87	86	163	233	283	...	...	...	59	40
Globe artichokes	..	...	...	...	...	...	22	31	46	...	...	...	...	...
Vegetable marrows	. .	57	45	54	46	23	...	...	...	...	...	...	...	...
Long marrows	...	...	69	65	61	...	...	...	...	100	69	100	43	38
Pumpkins	...	...	175	175	130	130	130	150	141	117	116	75	67	52
Melons	120	127	100	66	75	94	50	...	...	27	38	33	38	62
Water melons	120	130	96	70	...	...	...	...	...	20	44	45	33	...
Tomatoes	111	100	144	120	57	60	25	13	...	133	70	76	61	71
Grapes	37	50	62	26	60	57	...	...	...	37	66	38	33	...
Oranges	...	...	...	...	38	41	30	39	35	...	...	...	...	82
Mandarines	...	...	...	...	...	60	26	33	19	...	...	...	...	...
Lemons	...	47	...	41	69	43	44	31	60	...	...	...	...	58
Apples	66	34	..	...	...	...	...	...	...	24	26	...	...	...
Pears	...	...	...	...	...	...	...	...	...	25	50	59	13	...
Plums	54	71	...	...	...	...	...	...	...	...	...	...	...	...
Pomegranates	...	...	...	...	...	...	...	...	...	...	...	...	76	35

4th December, 1936.

(Sgd.) A. C. SHILL.

APPENDIX V.

Report of the Soil Engineer in charge of Fertile Soil Preservation for the calendar year, 1936.

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1. NOTICES RECEIVED REGARDING SOIL PRESERVATION.

The number of notices received during the year amounted to 1,019; of which 919 concerned Malta, and 100 Gozo. Their distribution was as follows:—

MALTA.

Hamrun	1,455	Cubic Yards
Birkirkara	3,808	,,
Naxxar	1,000	,,
Gżira	6,485	,,
Pietà	35	,,
Guardamanġa	35	,,
Msida	1,981	,,
Ta' Xbiex	250	,,
Sliema	470	,,
St. Julian's	965	,,
Għargħur	155	,,
Mosta	1,729	,,
St. Paul's Bay	2,100	,,
Sta. Venera	160	,,
Mellieħa	360	,,
Qormi	4,075	,,
Birżebbuġa	2,229	,,
Safi	635	,,
Pawla	5,965	,,
Siġġiewi	1,125	,,
Tarxien	1,277	,,
Rabat	3,987	,,
Luqa	1,393	,,
Gudja	592	,,
Qrendi	406	,,
Għaxaq	451	,,
Wied-il-Għajn	774	,,
Fgura	109	,,
Mġarr	184	,,
Attard	1,158	,,
Balzan	1,525	,,
Lija	115	,,
Żabbar	2,332	,,
Marsa	4,394	,,
Żurrieq	269	,,
Żebbuġ	1,396	,,
Marsaxlokk	1,291	,,
Kalkara	602	,,
Kirkop	391	,,
Dingli	845	,,
Mqabba	334	,,
Żejtun	2,121	,,

GOZO.

Sannat	276	Cubic Yards
Xagħra	198	,,
Xlendi	35	,,
Żebbuġ	190	,,
Xewkija	947	,,
Għajnsielem	115	,,
Għarb	432	,,
Kirċem	200	,,
Qala	165	,,
Rabat	796	,,
Nadur	400	,,
Għasri	312	,,
Total ...	65,029	Cubic Yards.

2. Amount of soil preserved.

The total volume of fertile soil which was preserved during the year amounted to 65,029 cubic yards. Of this total, 37,300 cubic yards were utilized for the reclamation of 116 tumoli gardens : 7,203 cubic yards for reclamation of fields at the rear of building sites : and 5,814 cubic yards for the formation of 35 fruit gardens.

To the foregoing must be added the volume of soil affected by notices received within the last 15 days. Naturally, fertile soil, regarding which notices were received towards the end of the year, has not yet been transported.

3. Comparison with operations during 1935.

The number of applications received during the calendar year 1936 was 1,019 (concerning a total of 65,029 cubic yards) as compared with 1,143 in 1935 (concerning a total of 64,622 cubic yards). It should be borne in mind that when the Fertile Soil Preservation Ordinance was promulgated on the 8th January, 1935, it was made retrospective, and consequently a considerable number of buildings commenced prior to the 8th January, 1935, were affected ; as a result, the total for 1935 was increased appreciably. This year's figures compare favourably with those for 1935, for, when due allowance is made for the number of buildings commenced in 1934 and included in the 1935 statistics, it is seen that there has been an increase in the number of applications received, which indicates that the Fertile Soil Preservation Ordinance has not deterred building operations in these Islands.

4. Amendment of Ordinance No. II of 1935.

The Fertile Soil Preservation Ordinance (Ordinance No. II of 1935) was amended on the 14th February, 1936, by Ordinance No. V of 1936, which, *inter alia*, gave an explanation of the term "permanently covered" with regard to fertile soil ; the word "available" was substituted for the word "used" in section 3 (2) of the principal Ordinance ; and provision was made for appeals lodged against the decision of the Director of Agriculture regarding (a) declaration of soil to be fertile soil for the purposes of the Ordinance, (b) the quantity of soil to be removed under section 7, and (c) the matters which may arise the proviso to section 8.

As regards these amendments it should be stated that : (i) the definition of *permanently covered* has served a good purpose in preventing evasions of the Law by people acting in bad faith, and (ii) the public have made considerable use of the substitution of the word "available" or the word "used" where their interests have been affected by the Fertile Soil Ordinance.

With respect to the amendment providing for appeals, it should be recorded that no appeals have been lodged although the right of appeal was always explained to persons who claimed to be aggrieved by the operation of the Fertile Soil Preservation Ordinance.

5. Reclamations.

(a) *Notable instances of reclamation during 1936 were the following:—*

1.	Experimental farm, Hammieri, Marsa	3,379	Cubic Yards
2.	Holding of Giov. Mallia, Sda. It-Torri, Birkirkara, (3 tumoli)	720	,,
3.	Poor House	228	,,
4.	Tal-Paromu, Bwieraq, Birkirkara, (1 tum.) ...	140	,,
5.	Angelo Debono, Taċ-Ċiċra, Sda. Torre, Birkirkara, (1 tum.)	230	,,
6.	Giacomo Borg, Sda. Torre, Birkirkara, (4 tum.) ...	550	,,
7.	Fields at rear of Gazan's Garage, Gżira, (6 tum.)	1,430	,,
8.	Villa Portanier, Wardija, (1 tum.)	165	,,
9.	Sta. Margherita, Mosta, (1 tum.)	164	,,
10.	Misraħ Għonoq, Mosta, (1 tum.)	350	,,
11.	Salvu. Mifsud, Sta. Margherita, Mosta, (1 tum.)	125	,,
12.	Tas-Simar, St. Paul's Bay, (1 tum. 4 mond.) ...	520	,,
13.	Ta' Petruni, St. Paul's Bay, (1 tum.)	500	,,
14.	Tas-Swaj, Għajn Tuffieħa, (2 Mond.)	180	,,
15.	Tal-Rkuplu, St. Paul's Bay, (1 tum.)	300	,,
16.	Ta' Braxia Glacis, Porte des Bombes, (20 tum.) ...	3,877	,,
17.	Sant'Indrija, Mensija, (10 Mond.)	1,970	,,
18.	Quarry ta' Gaxiulli, Sda. Don Mario, Qormi, (2 Mond.)	140	,,
19.	Tal-Wied, Qormi, (3 Mond.)	218	,,
20.	Waste lands at Hal-Farruġ, (3 Mond.)	217	,,
21.	Near tal-Hlas Church, Qormi, (3 Mond.) ...	143	,,
22.	Gregorio Briffa, Hal-Farruġ, (2 Mond.)	178	,,
23.	Waste lands tal-Brulli, Birżebbuġa, (3 Mond.) ...	231	,,
24.	Tan-Naxra, Birżebbuġa, (3 Mond.)	245	,,
25.	Tal-Ballottru, Birżebbuġa, (4 Mond.)	360	,,
26.	Tan-Noqra, Birżebbuġa, (2 Mond.)	160	,,
27.	Ta' Farfar, Birżebbuġa, (2 Mond.)	126	,,
28.	Fields on Safi-Żurrieq Road, (1 Tum.)	527	,,
29.	Waste Land at Albert Town, (1 Tum.)	324	,,
30.	Tax-Xewk, Pawla, (9 Mond.)	589	,,
31.	Tal-Borġ Waste land, (2 Mond.)	290	,,
32.	Tarxien Govt. Nursery, (3 Mond.)	268	,,
33.	Fields ta' Lamaċċa, Albert Town, (2 Mond.) ...	128	,,
34.	Ta' Leli-il-Mumi, Tarxien, (2 Mond.)	145	,,
35.	Pawla—Via Luqa, (3 Mond.)	211	,,
36.	Rear of Addolorata Cemetery, (1 Tum.)	388	,,
37.	Field Tal-Borġ, F. Falzon, (10 Mond.)	568	,,
38.	Pawla—Via Żabbar, (2 Mond.)	125	,,
39.	Siġġiewi-Żebbuġ Road, (10 Mond.)	875	,,
40.	Fgura—Via Tarxien, (2 Mond.)	102	,,
41.	Pawla Via Fgura, (3 Mond.)	135	,,
42.	Buskett Road, Rabat, (8 Mond.)	198	,,
43.	Fields overlooking Buskett, (5 Tum.)	2,835	,,
44.	Taċ-Ċarruta, Dingli, (3 Mond.)	230	,,
45.	Taz-Zeppita, Hal-Farruġ, (4 Mond.)	125	,,
46.	Tas-Smirna, Gudja, (1 Tum.)	158	,,
47.	Tal-Irsir, Gudja, (1 Tum.)	161	,,
48.	Tal-Gwiewer, Qrendi, (4 Mond.)	125	,,
49.	Bir-id-deheb, (5 Mond.)	86	,,
50.	Tal-Boxxla, Għaxaq, (7 Mond.)	128	,,
51.	Ta' Kallus, Għaxaq, (3 Mond.)	80	,,

52.	Waste lands belonging to H. Sant, A. & C.E., Wied-il-Għajn, (6 Mond.)	500	Cubic Yards
53.	Sda. San Antonio, Wied-il-Għajn, (4 Mond.) ...	156	,,
54.	Rear of Villa Ferris, Attard, (6 Mond.)	315	,,
55.	Waste land, Sda. Merino, Lija, (2 Mond.) ...	115	,,
56.	Tal-Għomu, Żabbar, (4 Tum.)	766	,,
57.	Ta' Stejfen, Żabbar, (2 Mond.)	116	,,
58.	Ta' Wara il-Ġonna, Żabbar, (3 Mond.)	125	,,
59.	Tal-Burżett, Żabbar, (3 Mond.)	178	,,
60.	Żabbar Via Xgħejra, (5 Mond.)	250	,,
61.	Żabbar—Via Xgħejra, (5 Mond.)	488	,,
62.	Tal-Loqqu, Marsa, (3 Mond.)	138	,,
63.	Il-Bajjada, Marsa, (3 Mond.)	166	,,
64.	Fields near Parish church, Marsa, (4 Mond.) ...	218	,,
65.	Tas-Samra, Hamrun, (8 Mond.	348	,,
66.	Hal-Muxi, Żebbuġ, (1 Tum.)	450	,,
67.	Tas-Silċ, Żejtun, (10 Mond.)	474	,,
68.	Tal-Motz, Żejtun, (4 Tum.)	473	,,
69.	Sqaq Nejder, Kirkop, (4 Mond.)	296	,,
70.	Ta' Pizzuta, Żejtun, (3 Mond.)	103	,,
71.	Ta' San Pitru, Żejtun, (3 Mond.)	148	,,
72.	Ta' l-Apparel, Żejtun, (2 Mond.)	109	,,
73.	Tal-Iskalpell, Żejtun, (4 Mond.)	215	,,
74.	Ta' San Niklaw, Żejtun, (2 Mond.)	125	,,
75.	Ta' Qerrieda, Żejtun, (2 Mond.)	100	,,
76.	Tas-Seminarju, Mqabba, (3 Mond.)	140	,,

Special mention should be made of the Ta' Braxja Glacis, which up to the present has absorbed 3,877 cubic yards (20 tumoli), and also of the King Edward Avenue outside Porta Reale, where 112 cubic yards were utilized for the plots which have been sown with Bermuda Grass.

(b) *Crucifix Bastion Garden.*

This branch of the Department has been requested to furnish the necessary amount of fertile soil for the Children's Playground and Garden at Crucifix Bastion, Floriana, and this work will be begun towards the end of the rainy season as soon as the soil is in a condition to be transported.

(c) *"Torba" or "Turbatz".*

A noteworthy instance of enterprise was observed in connection with the Monastery of the Discalced Carmelites at tas-Silċ. The surface soil was found to be overlying a stratum of what is termed "torba" or "turbatz", which appears to be stone in an advanced stage of decomposition and on the eve of becoming fertile soil. A farmer collected some 300 cubic yards of this "torba" sub-soil and, after allowing it to be weathered, was agreeably surprised to find it converted into soil suitable for use in reclamation of rocky land.

(6) Enforcement of the Ordinance.

(a) *Legal Action.*

During the year under review, six summonses, affecting fifteen persons, were issued for contraventions of the Fertile Soil Preservation Ordinance. One individual was acquitted; the others were fined or reprimanded or given a period wherein to comply with the provisions of the Law. One of considerable importance is still pending before the Court, a private A. & C.E., having been nominated by the presiding Magistrate to hold sittings and hear evidence and report whether the accused parties are guilty in terms of the charges preferred against them.

(b) *Transport of soil.*

Sundry carters and other transporters of soil have caused trouble by persistently disregarding the terms of the permits granted. Numerous instances have been reported by the Soil Inspectors where the soil removed from specific building sites has not reached its destination inasmuch as the carter, or truck-driver, has elected to dump the soil on another spot which he has considered to be more favourable to his ease or to his profit. This nuisance grew to such dimensions that it became necessary to ask for specific instructions from the Attorney General and action is now being taken against the persons held responsible for such contraventions.

(c) *Failure to state name of responsible Architect.*

Another source of trouble has arisen from the omission of certain owners to give the name of the Architect in charge of their building. Inasmuch as the architect is one of the three persons liable to prosecution in terms of section 14 of the amended Ordinance No. VI of 1936, an obligation on the part of the owner to submit the Architect's name would greatly facilitate matters.

(d) *Enforcement in Gozo.*

As in 1935, the requirements of the Fertile Soil Preservation Ordinance have, in general, been carried out in Gozo. Thrift in Gozo, however, is such that the Government is finding it somewhat difficult to acquire soil gratis for Chambray where it is required for agricultural purposes (orchards, gardens, etc.).

(7) PHOTOGRAPHY.

Some photographs have necessarily been taken in the course of the operation of the Fertile Soil Ordinance. One of the Soil Inspectors has taken charge of the Departmental Zeiss Camera and is now, in addition, responsible for photographs of general agricultural operations and development which are required to meet local and foreign demands.

2nd January, 1937.

(Sd.) R. J. D. COUSIN,
Soil Engineer.